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ABSTRACT

This proceedings contains 27 articles on improving teaching and learning in higher education. The following articles are included: "Gender Differences and Faculty Work Satisfaction," (N. Beardslee, N. White, and J. Richter); "Using Your Own Student Evaluation Form for Teaching Improvement," (Y. Bhada); "Excellence in College Teaching," (J. Follman); "Faculty Turnover: An Analysis by Rank, Gender, Ethnicity and Reason," (D. Honeyman, Jr. and S. Robinson Summers); "Linking the Faculty Recognition Process to Teaching Excellence," (J. Shirk and M. Miller); "Part-Time Faculty Evaluation: A Campus Case Study," (J. Williams); "Reigniting the Flame: TQM Tactics for Faculty Rejuvenation," (W. Akin); "Reigniting the Flame: TQM Tactics for Faculty Rejuvenation (Transforming the Marketing Imperative into a Career Boost)," (C. Chambliss); "Using Professional Software To Enhance Teaching Excellence," (F. Coulter and J. Stryker); "Partnerships Improve Teaching and Learning," (L. Hirst and D. Blomquist); "Creative Teaching and the Practical Applications of Knowledge," (D. Kushner); "Writing (and Talking) To Learn: Integrating Disciplinary Content and Skills Development," (D. McCabe); "Increasing Teacher Effectiveness through Tech Prep Partnerships," (G. Moore and C. Holm); "Diary of a Designing Professor (Or How I Went beyond Content Expertise!)" (C. Price); "Sleeping with the Enemy: Making Outcomes Assessment Work in the Classroom," (P. Schueler); "Participative Learning Experiences in the Professional Studies Classroom," (S. Colvin); "Reality 401: An Intense Preservice Field Based Program for Middle Grades Education," (A. Ducharme); "Pedagogical Implications of a Meritocratic Analysis of Burton Clark's Cooling-out Process," (D. Hellmich); "Institutional Change as a Renewal Process: NHMCCD Model," (C. Brock, P. Gray, O. Joynton, and N. Thorogood); "Teaching Minority Content: A Community Based Model," (K. Kelly); "The Underprepared Student: A Student Centered Process Coordination Model," (M. Popejoy); "The Rigor and Exorbitance of Reading: Teaching Critical Thinking in the Freshman Honors Seminar," (B. Brown); "Arts and Science/School of Education: A Cooperative Approach to the Teaching of Introductory Geography," (C. Hertzog and C. Lieble); "Visions Management: Effective Teaching through Technology," (R. Larson); "Rejuvenating Instruction through

Development of an Applied Lab for Sociology Students," (E. Rosengarten and D. Fletcher); "Seeds and Searches: The Writing Process in Higher Education," (T. Smith); "Organize the Theme and Renew the Method for Teaching Excellence in College Physics," (G. F. Toth); and "How Taking Creativity Out to the Schools Can Foster Exciting Writing at an Early Age," (R. Wilson). (TGI)

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ED 390 454

Proceedings of the Eighteenth National Conference on Successful College Teaching

Co-sponsored by

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February 26–28, 1994
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INTRODUCTION

The articles and abstracts in this volume were presented at the 18th National Conference on Successful College Teaching held in Orlando, Florida, February 1994. The groundwork for this publication was laid during the conference by a number of interested participants and conference managers. An informal discussion regarding the high quality of presentations and the great need to disseminate the ideas to a broader audience led to representatives from three institutions committing to publishing the conference proceedings. The Division of Continuing Education at the University of Florida solicited manuscripts from the presenters. Metropolitan State College of Denver formed an editorial board to review, edit and abstract the manuscripts and to format the total publication. Valdosta State College, Georgia, printed sufficient copies of the publication for distribution. Our appreciation goes to Dr. David S. Honeyman and Dr. Dale Campbell from the University of Florida (Gainesville), Dr. Robert Michaels from Valdosta State College, and Dr. Joan M. Foster, Dr. Dorothy Snozek, and Dr. Charles Branch from Metropolitan State College of Denver for making this publication a reality. We also want to express our appreciation to Dr. Gene Saxe who, along with Dr. Snozek, worked many hours to edit the content of the publication. These two individuals have exercised their best judgment in making editorial decisions. Manuscript changes reflect the need for clarity and some consistency in approach and format. We hope the editorial board work well represents the authors' ideas.

We hope you find the ideas, practices, and research helpful as you continue your commitment to improving teaching and learning in higher education. The articles and abstracts represent giant efforts being made nationwide to improve the quality of education at all levels. If you find particular areas of interest, please contact the author directly. We know that s/he will be more than happy to share ideas with you.

The publication of the 18th National Conference on Successful College Teaching is especially significant since this conference has now merged with a conference sponsored by the Florida Community College of Jacksonville. If you are interested in teaching, learning, and technology, creating innovative learning environments, plan on attending the 6th National Conference on College Teaching and Learning, April 5-8, 1995, in Jacksonville, Florida. For further information, contact Bill Martin, (904) 623-3155, fax: (904) 632-3393.

A NATIONAL CONFERENCE ON SUCCESSFUL COLLEGE TEACHING
February 26-28, 1994
ABSTRACTS

Gender Differences and Faculty Work Satisfaction

Dr. Nancy Beardslee, University of Northern Colorado
Dr. Nancy White, University of Northern Colorado
Dr. Judith Richter, University of Northern Colorado

Surviving the stress of a University career calls for innovative strategies in meeting the demands of teaching, advising, administrative duties, service and scholarly activities. A research project involving 250 University faculty indicated significant differences between male and female faculty in work satisfaction, coping skills, social support and physical symptoms. For both men and women, commitment is a major factor related to work satisfaction. For women colleague support is more of a determinant for work satisfaction. Discussion of the findings suggests effective stress reducing techniques and work satisfaction factors that may be utilized in the University setting.

Using Your Own Student Evaluation Form for Improvement

Yezdi Bhada, Georgia State University

This presentation will describe how an educational unit can develop and use a home-grown instrument to get student inputs for the purpose of improving classroom performance. Understanding the pre-conditions for successful implementation, the criteria for effective instruments, and the process for development and implementation can lead to an effective institutional-specific instrument. Care in providing meaningful statistical reports, conducting the proper research on the data, and updating of instruments are necessary for successful implementation. Finally, providing a procedure for meaningful usage of the data is crucial.

The Rigor and Exorbitance of Reading: Teaching Critical Thinking in the Freshman Honors Seminar

Byron Brown, Valdosta State University

Traditional textbooks on critical thinking teach students to develop skeptically intellectual responses to the texts they read. Genuinely powerful and generative forms of critical thinking require teaching students to read creatively as well. The work of Royston Roberts, David Killefer, Sigmund Freud, and rhetoricians Richard Young, Alton Becker, and Kenneth Pike provide and intellectual framework for designing assignments that emphasize the creative dimensions of reading.

Participative Learning Experiences in the Professional Studies Classroom

Scott Colvin, Sacred Heart University

Often the professional studies course outline and classroom learning model are dominated by concern for a common body of knowledge. The result: A design that ignores student interaction and the development of critical thinking and communication skills. Reflections from the presenter's personal journal will highlight efforts to address this dilemma with a combination of individual and group devices including: computer assignments, case studies, role playing and written projects.

Reality 401: An Intense Pre-service Field Based Program for Middle Grades Education

Dr. Adele Ducharme, Valdosta State University

Given the reality of the broader mission of schools, it becomes obvious that the knowledge and skills which teachers must possess have changed. Consequently, a quality middle grades undergraduate program was designed to be responsive to the needs of the people and organizations of South Georgia. Furthermore, the program provides a collaborative training base with public school faculties. This program involves pre-service teachers and university faculty immersed in working with middle grades faculties, administers, students, parents and staffs. Reality 401, a senior year partnership, is a joint effort of MGE faculty, public school faculties, and MGE seniors. The focus of this session will be a discussion of the development, implementation and evaluation of the field based program, Reality 401.

Excellence in College Teaching

Dr. John Follman, University of South Florida

The three general criteria of evaluation of effectiveness of college teaching are: product, i.e., student achievement; presage, i.e., instructor characteristics; and process, i.e., contextual and pedagogical phenomena. Other approaches are: identification of effective-ineffective teachers by students primarily, by peers, selves, and administrators; agreement on ratings by these criterion groups; factors in student rating scales; and nominations for teaching awards. Students' opinions concerning effective-ineffective instructors in approximate rank order, are: knowledge of subject matter; communication ability; pleasing personality; interest in students; encourages classroom participating; stimulation of interest; fairness; organization, preparation; enthusiasm for subject; sense of humor; encourage independent thinking; and does research.

Pedagogical Implications of a Meritocratic Analysis of Burton Clark's Cooing-out Process

Dr. David Hellmich, Santa Fe Community College

This paper explores practical pedagogical implications for community college faculty of a study that measured the cooling-out process using a meritocratic definition of fairness to determine if this process denied access to the transfer degree of students from particular segments of society. Analysis of this study's results supports the meritocratic supposition that access to the transfer degree appears to be unrelated to the socio-economic status, race, and gender of students in the cooling-out process. The finding that older students were more likely to be cooled-out than younger students, however, lends support to some key critical theory tenets and calls into question whether older students in the cooling-out process are being fairly denied access to the transfer degree.

Partnerships Improve Teaching and Learning

Lois Hirst, Northern Michigan University
David Blomquist, Northern Michigan University

There are many practical, creative teaching alternatives. However, unless there is a process to assess the effectiveness of these alternatives, there is no way to know whether they are an improvement over traditional lecture. A critical analysis of instruction with a peer in a non-threatening environment can lead to improvement in teacher effectiveness and student learning. This presentation will focus on a peer project at Northern Michigan University designed to help faculty improve teacher effectiveness and student learning.

Visions Management: Effective Teaching Through Technology

Dr. Robert Larson, Pittsburgh State University

This paper will research and analyze the ramifications of incorporating the uses of several new technologies for college teaching in the 21st century. For example, it will discuss how the use of video tapes, an excellent medium for providing information for today's classroom instruction, is not always precise enough from a time management or a classroom management standpoint for complete classroom efficiency. Included in the paper will be an analysis of the potentials for such devices as erasable video discs, laser videos under computerized control and the digitation of print, image and sound.

A Cooperative Approach to the Teaching of Introductory College-level Geography

Dr. Charles Lieble, Valdosta State University
Dr. C. Jay Hertzog, Valdosta State University

This project was begun to examine the effectiveness of cooperative learning at the college level. The professor of the introductory geography course in the School of Arts and Sciences taught one of his two classes in his traditional manner, i.e. lecture, multiple choice tests, etc. The second class was team taught with the social studies specialist from the Department of Middle Grades Education, School of Education. At the start of the quarter, the team-taught class was given several inventories to determine their learning styles and hemisphericity. Based on this information plus their gender, this class was divided into groups of four. The method of presentation for this second class was modified so that it reflected the strengths of both the geography professor and the middle grades professor. Following class-wide information sessions the students were given study questions, broken into their groups, and provided with class time to answer the questions. The tests for both groups were changed from only a multiple choice format to multiple choice and discussion questions. The results of this study will be presented with recommendations for further work.

Organize the Theme and Renew the Method for Teaching Excellence in College Physics

Dr. Gabor Toth, Lake City Community College

The paper discusses and gives an answer to the question of how to teach an understandable physics. Among the academic subjects, mathematics serves for teaching students the logical way of thinking. Physics should serve to teach them to notice, that in nature there are processes. Some events cause others and everything is in constant motion and in constant change. This view of nature can be taught well by the simplest science, that is, physics. Because of its simplicity the numerical side of physics has reached a very high level. However, mathematics which is an advantage for physics in research work becomes a disadvantage in teaching physics. At least 80% of the problems assigned for solution in teaching are formal repetition of the mathematical form of the theorems of laws of physics. Only the words which are used in the problems are "practical" words. That form of practicing physics stiffens the way of thinking of the students. Instead of understanding the processes in nature by physics, in the thinking of students stubborn algebraic formulas and letters represent physics. For this reason, it is quite natural that after leaving school these formulas will dropout of mind and students will remember their physics teaching with whom they had human-like associations rather than physics itself.

Part-Time Faculty Evaluation: A Campus Case Study

Dr. James Williams, Yavapai College

During each of the past 13 years, the Verde Valley Campus of Yavapai College in Arizona has used the same system of part-time faculty evaluation. The system includes a standard student evaluation, an administrator in-class evaluation and his perceptions of its impact on instruction.

How Taking Creativity Out to the Schools Can Foster Exciting Writing at an Early Age

Robert Wilson, Shawnee State University

Good writing is not probable in adulthood unless it has been taught at a young age. Too often, all that is taught is the importance of factual accuracy and mechanical correctness. Good writing has little to do with either. Good writing is, almost always, a blend of fact and fiction, so compellingly cold as to take a reader hostage. For writing to be compelling, there is obviously a need for writers to unleash their imaginations and let the "madman" work.

PANELS

Reigniting the Flame: TQM Tactics for Faculty Rejuvenation

Dr. Catherine Chambliss, Dr. William Akin, Dr. Lynn Thelen, Ursinus College

The presenters will discuss several successful strategies for restoring faculty enthusiasm and commitment to teaching excellence, derived largely from TQM principles. The Ursinus approach recasts the marketing imperative of the '90's as a powerful tool for campus coalescence and reinvigoration, rather than as an unwanted distraction. Specific TQM-based interventions and their intended and unintended outcomes will be described. Future applications will be explored.

Beyond Content Expertise

Dr. Catherine Price, Dr. Bonnie Keller, Dr. Ellen Wiley, Valdosta State University

This will be a panel discussion on effective teaching strategies necessary for creating successful classroom environments and for promoting student learning. Based on research and practical experience in traditional and distance education classrooms, the panel will discuss how content expertise can be enhanced to ensure desired learning outcomes. Specific instructional strategies, learning activities, and communication techniques will be presented. A case study will detail the planning process.

WORKSHOPS

Student and Faculty Perceptions of the Relevant Factors in Teaching Excellence

Dr. Joan Foster, Metropolitan State College of Denver
Dr. Dorothy Snozek, Metropolitan State College of Denver
Dr. Charles Branch, Metropolitan State College of Denver

Based on surveys or faculty and students at an urban institution of 18,000, the workshop will present a model for enhancing teaching. Survey instruments and findings will show: (1) what students of various majors, ages, gender, and ethnic minorities value in college faculty; (2) what faculty identify as needs for improving teaching; and (3) what faculty consider as adequate preparation for teaching. The results will be utilized in three ways for workshop participants: (1) present a model for excellent teaching; (2) invite other institutions to replicate the studies; and (3) benefit students and faculty in various types and sizes of institutions

Increasing Teacher Effectiveness Through Tech Prep Partnerships

Fran Holm, Santa Fe Community College
Glen Moore, Santa Fe Community College

Tech Prep partnerships facilitate innovative college teaching in the areas of curriculum content and instructional strategies through the collaborative efforts of secondary/postsecondary, academic/technical faculty members and business/industry representatives. Thoroughly ascertaining what academic and technical skills are essential to prepare students for higher education and for careers in a technological society and incorporating the information into new curriculum necessitate exciting and challenging changes in college classrooms. Examples of teaching excellence throughout the nation including Florida, South Carolina, and Washington will be highlighted in this workshop.

Teaching Minority Content: A Community Based Model

Kenneth Kelley, Northern Michigan University

This project involved an attempt at creating a new and more effective means of teaching minority content. The audience were senior social work students all involved in their major field placement experience. The focus for the project involved Native American content and was to involve examining, close up, direct service applications as they involved an Indian population. The teaching plan called for looking at clinical applications of social work services within the context of the tribal organization. This particular project happened to involve an Indian reservation, however, this method of "going to where the learning is" has some broader implications, particularly for dealing with minority groups and minority issues.

POSTER SESSIONS

Institutional Change as a Renewal Process: The NHMCCD Model

Olyn Joynton, N. Harris Montgomery Community College
Cher Brock, N. Harris Montgomery Community College
Pat Gray, N. Harris Montgomery Community College

When the NHMCCD found itself in the late eighties with a sound financial footing, a multicampus structure, and generally adequate physical facilities, it was time for a new look at instructional methods, student services, community outreach, and technological support. Therefore, new instructional delivery systems, including collaborative teaching, distance learning, and honors program, and multicultural courses, have appeared within the District to meet the needs of the diverse communities within the service area. Along with these innovations in instruction have come the necessary changes in student services and technology, the costs of which have been met by a combination of tax and tuition increases, grants (including Title III), the establishment of a foundation, and a record of continued growth enrollment. The internal renewal has been painful for some faculty, but the majority are agreed that the changes auger well for its ability to provide the highest possible quality of services to students.

EVALUATION OF FACULTY

Proceedings of the Eighteenth National Conference on Successful College Teaching

February 26–28, 1994
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GENDER DIFFERENCES AND FACULTY WORK SATISFACTION

Dr. Nancy Q. Beardslee
Dr. Nancy White
Dr. Judith Richter
University of Northern Colorado

Abstract
Surviving the stresses of a University career calls for innovative strategies in meeting the demands of teaching, advising, administrative duties, service and scholarly activities. A research project involving 250 University faculty indicated significant differences between male and female faculty in work satisfaction, coping skills, social support and physical symptoms. For both men and women, commitment is a major factor related to work satisfaction. For women colleague support is more of a determinant for work satisfaction. Discussion of the findings suggests effective stress reducing techniques and work satisfaction factors that may be utilized in the University setting.

In examining faculty work satisfaction differences have been noted between male and female faculty. Although the differences cannot be generalized to all male and female faculty, it is important to examine gender variations in light of faculty work satisfaction. Studies in the 1980's found that female faculty reported more stress, less satisfaction and higher dropout rates from academic life (Brown et al., 1986; Project on the Status and Education of Women, 1986).

One model that can provide direction for understanding gender differences in relation to faculty work satisfaction incorporates the concepts of environmental and personal stressors and the impact on quality of life.

The environment of higher education is increasing in stress today due to decreasing resources and increasing work expectations (Seldin, 1987). Women have specific stressors as noted in previous research studies because: salaries are lower; there is lesser likelihood of promotion and female faculty have lower self efficacy as researchers (Astin & Snyder: 1982). Gender differences have been noted in that the male perceives his main commitment as a breadwinner and prioritizes his time on the basis of work. The woman sees her main responsibility as that of family and feels the role strain of trying to have the career and family (Sorcinelli & Gregory, 1987). Historically, the woman in academia was traditionally unmarried and childless. Freeman (1977) points out that between 33 - 50% of female faculty members never marry or bear children. Attempting to combine multiple roles can be stressful.

Gmelch (1993) found that 60% of total stress experienced by faculty came from work. Areas of stress noted were: time constraints, student interaction, lack of money, reward and recognition, professional identity and departmental influences. Richard and Krieshok (1989) found that men's stress decreases as rank increases and women's stress increase as promotion is attained. Women faculty experience more strain than men and report more anxiety, loneliness and health problems.

Gender Difference

One part of a 1993 study of 162 faculty from three institutions was conducted to study factors (eg. gender and stress) that influence faculty work satisfaction. The sample for the study included 63 men and 99 women.

Significant gender differences found in this 1993 study were:

1. Men were more satisfied with their work;
2. Men experienced less faculty stress;
3. Women used palliative coping styles more often;
4. Women had more physical symptoms of stress.

The Gender Model of Job Satisfaction demonstrated that being male, having collegial support, and a commitment to the academic life style, significantly improved job satisfaction. While female faculty experienced more stress than their male counterparts, supervisor support was critical to reducing the impact of stress on job satisfaction. Women attempt to combine multiple roles which in turn causes increased stress and strain. Women feel that they may need to be as attractive as Rita Hayworth, as athletic as an Olympic competitor, and perhaps last being a dedicated worker and trying to improve conditions for students and faculty.

The academic environment may be a source of physical and psychological stress, however, the degree of strain experienced may be affected by availability of coping strategies and personal resources (Brown., et. al., 1986). In a time of decreasing resources and increasing demands in higher education it behooves faculty to incorporate effective stress reducing activities. A necessary first step is the reconstruction of self expectations. Striving for excellence in all areas is unrealistic. With this in mind, stress reduction can receive more attention.

The aforementioned strategies are applicable for both men and women. In the future, there may be gender specific strategies but at this point there is a lack of research to specify gender specific methods. Graduate programs at the Master's and Doctoral level do not include these strategies for survival in academia. Perhaps in the future they will be incorporated.

Intellectual Strategies

Intellectual strategies to decrease stress include mentally learning specific coping skills by attending workshops, orientation programs, and employee assistance programs. Following are specific suggestions in this area.

Increasing communication skills: This is a first step in managing stress. Discussion of problems can help dissipate the negative mind set. Classes in assertive or confrontative communication can be helpful in increasing the chances of meeting challenges in a professional manner. Just as classes involving role playing increase student skills in communication, these are needed opportunities for faculty.

Increasing problem solving approaches: Problem focused efforts include attempts to find out more about the situation or taking some positive action in terms of it. Furthermore, steps in problem solving can be learned that will assist the faculty member in viewing the situation objectively and feeling empowered in having a plan to approach the multiple demands of academia.

Time management skills: Initially new faculty that do not have the structured 40 hour work week imposed on them, feel that with only 15 hours to teach per week that they can complete many other projects also. It soon becomes evident that this is not the case as the faculty attempt to juggle teaching, advising, research and service. Female faculty may end up using their "free" time in nurturing other faculty and end up spending half their nights completing academic work. Learning to schedule, prioritize, and separate social and work activities are important time management skills.

Focusing and building on interests: The faculty members who identify their main interests and then combine scholarly, teaching and service activities within this realm are much more productive. For example, if a faculty member had an interest in
ethics- they could teach ethics, research ethical issues and also provide consultation on ethics. In this manner, their expertise in the area would build and grow. Professors may become involved in various activities in which they have no interest and consequently scatter their energy and time.

Participative management and shared governance: It has been found that where faculty have a direct involvement and responsibility in the governance of their university, stress is decreased. Faculty feel they have more control and this enhances commitment (Seldin, 1987).

Physical Strategies

The importance of utilizing physical strategies to reduce stress is well known. There are variations, however, that are unique to the academic environment.

Physical exercise: Development of the physical self may not be valued per se by the academic population who value intellectual pursuits above all. Also, the academic personality may feel that they need to excel in all areas and physical exercise may not be one of their fortes. A new approach practiced in wellness centers is for people to be encouraged to be "active". Incorporating enjoyable physical activity that is non-competitive seems to encourage participation. This strategy involves a change of mind set; however, the rewards are great for the participants.

Renewal time: Fellowships and sabbaticals are important in revitalizing faculty. In fact, businesses are now utilizing this strategy to enhance productivity. Time away from normal pursuits can provide the faculty member an opportunity to examine her/his field with a fresh, new look. Some faculty are "martyrs" and need to be encouraged to take the sabbatical when it is appropriate. The ideal experience is to change environments completely for the semester to enhance the experience.

Realistic evaluation plan: It is important that the plan be realistic and not be based on a 70 hour week. In a time of budget constraints and increased productivity, a reevaluation of expectations needs to be specific. There may be a need for increased class teaching assignments but as these are designed, faculty need to send a clear message that other activities may need to be decreased.

Emotional Strategies

Emotional strategies are the most popular method of coping with stress in general. Although academics may scoff at the use of self-help books and workshops, these are, in fact, sometimes the best resources available.

Self expression: Surviving the stresses of academia can be easier for those who express themselves. Collegial support can be helpful in examining conflicts of time and energy. By discussing problems faculty can gain new awareness and possible approaches to handling the stressors. Journaling often appeals to academics as it is private and yet still expressionate of the feelings.

Limit setting: Learning to set limits for oneself and others is a hard learned skill. Women may especially have a hard time in separating out their nurturing and professional roles (Statham, et. al.: 1991). Keeping lists and prioritizing on a daily basis is one way to reinforce realistic expectations.

Role clarification: Defining and clarifying roles and expectations should be an ongoing process. When a rigid deadline needs to be met, sharing this information with others at work and at home can decrease the expectations for a limited time. Identifying a variety of resources that can assist in the workplace and at home is necessary. For example, a list including resources for developing media for presentations, or a possible handyman for home repairs is helpful. The next step is, of course, learning to ask for help when necessary.

Self esteem: The final suggestion for decreasing or handling stress is to be aware of the threats to self esteem in university life. Teaching classes for which one doesn't have the expertise is stressful and time consuming. While this may be necessary at times, if this is occurring every semester, the results on the teacher can be devastating. A participative management organization would hopefully prevent this from occurring, however, faculty need to learn to protect themselves. And of course, in academia there is the conglomeration of the "best and brightest" who are able to be "Teacher of the Year", and grant writer (and recipient) for megabucks, all in one environment. Faculty need to consider their positive attributes and not dwell and compare themselves always to the outstanding achievers.

Conclusion

Incorporating these strategies can be viewed as having a parachute that is available when riding in an airplane. It is not expected that stress will be nonexistent but that it will be kept at manageable levels. Chronic stress has too high a price tag of depression, cardiovascular pathology, burnout, and turnover. Academia will increasingly have stressors placed upon it and the goal is to be able maintain a personal and professional joy in life, while surviving the academic demands.

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USING YOUR OWN STUDENT EVALUATION FORM FOR TEACHING IMPROVEMENT

Yezdi Bhada
Georgia State University

Abstract

This presentation will describe how an educational unit can develop and use a home-grown instrument to get student inputs for the purpose of improving class room performance. Understanding the preconditions for successful implementations, the criteria for effective instruments, and the process for development and implementation can lead to an effective institutional-specific instrument. Care in providing meaningful statistical reports, conducting the popper research on the data, and updating of instruments are necessary for successful implementation. Finally, providing a procedure for meaningful usage of the data is crucial.

Summary

It is generally agreed that student ratings of faculty performance are essential for improvement of instruction. Except for the die-hard who still maintains that "students cannot evaluate me", most faculty members would agree with Professor William Cashin's statement that "student ratings tend to be statistically reliable, valid, and relatively free from bias, probably more so than any other data used for faculty evaluation," (Cashin 1988). Even the most critical faculty member is likely to agree with Peter Seldin when he states that "if teaching is to be evaluated, a systematic measure of student opinion can hardly be ignored. The opinions of those who eat the dinner should be considered if we want to know how it tastes," (Seldin 1993).

Recognizing that systematically accumulated student inputs are essential, the next issue is to decide on how the inputs are to be received. Formal instruments that require students to provide their perceptions of faculty behaviors and attributes have been used for decades. Therefore, the question turns to the acquisition of a usable instrument. The first decision involves a choice between adopting a ready-made instrument that is available in the market, or to develop a home-grown (institutional-specific) instrument to fit the specific needs of one's unit. There are several reliable and valid instruments available that have been tested over time and which are currently supplied by organizations and educational institutions. For example, the Educational Testing Service's Student Instructional Report (SIR) and Kansas State University's Instructional Development and Effectiveness Assessment (IDEA) system, have been adopted by several colleges and universities. There are several advantages to using these instruments and adapting them to one's own environment. However, some institutional units may prefer to develop their own surveys so that they have a tailor-made instrument for their organization. The advantages and disadvantages of both these approaches will be discussed in the course of the presentation.

Developing an Institutional-Specific Instrument

Assuming that an organization decides to develop its own instrument, it needs to follow a successful strategy for effective results. The experiences at Georgia State University's College of Business Administration, which uses its own instrument, will be the basis for illustrating an approach to the development and implementation of an institutional-specific instrument.

The first step in the process of development is to recognize conditions that are required to assure success, or rather to avoid failure. These pre-development conditions include securing administrative support, incorporating faculty involvement, communicating continuously with the faculty and the administration, providing assurances that instruments will be used with care, and carefully thinking through the process for development, implementation and usage of the instrument. These, and other elements of successful student rating programs will be discussed.

Criteria for effective instruments also need to be clarified. These criteria include the ability of the instrument to provide (l) feedback for improvement; (2) information for administrative decisions; (3) flexibility to adjust for differences; and (4) comparability for evaluative decisions. Also, the instrument should meet the requirements of: (l) relevance, which is the psychometric property that is analogous to validity; (2) reliability, to assure similar results during different administrations and (3) administrative feasibility. Each criterion will be detailed for better understanding.

For the instrument to provide meaningful results, several important steps have to be undertaken. These steps include the development of the instrument itself, making provisions for the revision of the instrument, and making arrangements for the development and revision of statistical reports and feedback information. The process also includes the administration and collection of data, making decisions on the frequency and timing of administration, distribution of forms and related materials to instructors, classroom administration of the survey and gathering of the completed responses. How the student-generated data is to be used has to be clearly detailed. For example, whether the information will be used for year-end merit raise decisions, promotion and tenure decisions, and or research purposes needs to be clarified. Finally, the policy related to the retention of the student-generated data and summarized results must be expressed.

Using the Instrument

No system should be instituted until it has received formal approval by the faculty and the administration. Once the approval has been received, then the instruments can be printed, the procedures for administering published and distributed, and the program implemented. Collecting the forms, processing the data, and distributing the results involve more complexity than generally anticipated. Peculiarities of each of these steps will be discussed.

The arduous task of conducting research on the data requires time, expertise and care. Conducting research, to establish reliability (to include inter-rater stability and time stability), and relevance (to include face validity, convergent validity and construct validity) needs to be considered.

Perhaps the most important and difficult part of the approach is related to the development and dissemination of statistical reports. These reports form the basis for formative and summative decisions, and therefore, become the focus of attention. The reports have to incorporate information that provides more than simple averages. The presentation of comparative data that includes common elements and more detailed factor-analytic information will be illustrated.

Considerations for updating the instrument have to be incorporated in the initial planning. The GSU-CBA experience on updating will be described.

Finally, using the results from the surveys to guide faculty for improved classroom performance is a crucial segment of the undertaking. Different ways in which faculty can be helped to use the data as information in their developmental processes will be discussed.

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EXCELLENCE IN COLLEGE TEACHING

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Abstract

The three general criteria of evaluation of effectiveness of college teaching are: product, i.e., student achievement; presage, i.e., instructor characteristics; and process, i.e., contextual and pedagogical phenomena. Other approaches are: Identification of effective-ineffective teachers by students primarily, by peers, selves, and administrators; agreement on ratings by these criterion groups; factors in student rating scales; and nominations for teaching awards. Students' opinions concerning effective-ineffective instructors in approximate rank order, are: knowledge of subject matter; communication ability; pleasing personality; interest in students; encourages classroom participating; stimulation of interest; fairness; organization, preparation; enthusiasm for subject; sense of humor; encourage independent thinking; and does research.

Introduction

The three traditional criteria of evaluation of excellence of college teaching are product, presage, and process. Product, i.e., student achievement, is the most accepted criterion, particularly on standardized, or demonstrated psychometrically sound, achievement tests.

The crucial college teacher evaluation relationship is the product correlation of .43 between student achievement and their ratings of the effectiveness of their instructor (Follman, 1974; Cohen, 1981). The r's, between student achievement and ratings of teaching effectiveness by each of all of the other criterion groups, peers, selves, administrators, are all low (Follman, 1984).

Presage variables include instructor demographic, intelligence, knowledge, training, personality, etc., characteristics. Presage r's with student achievement are all low except teacher verbal ability, clarity, etc., and also enthusiasm, both of which correlate modestly, some of the time, with student achievement ~Follman, 1984).

Process variables include contextual, pedagogical, i.e., lecture vs discussion, phenomena. Process r's with student achievement are also modest, usually not above .30 (Follman, 1984).

Purpose

The purpose of this paper is to report tne literature of college students opinions of the characteristics of excellence of teaching by college instructors.

Feldman (1988) in a meta-analysis obtained a correlation of .71 between student and faculty perceptions of characteristics considered important for good teaching, considerable congruity. For this reason, students' perceptions, wishes, desires, etc., about instructors' teaching behaviors, will be strongly emphasized in this paper.

It should also be noted that Feldman (1977), in a review across four studies, found correlations of .40 to .60 between initial impression of instructor or course and the subsequent student ratings. He also found some limited evidence that, in addition to initial impression, precourse general impressions also appeared to be related to student ratings. Consequently, the first class meeting may be more important than any other.

Now addressed will be the characteristics of "good" instructors.

Characteristics, Qualities, Traits, etc., of "Good" Instructors

In a study of students of graduate teaching assistants across six disciplines at the University of Illinois Grush & Costin (1975) identified five variables as important characteristics of good teaching: ascendant, confident, assured and active leaders; energetic, vigorous and enthusiastic classroom presentations; positive personal relations, with faith, trust, tolerance, and understanding in their students; control, definition of class content and objectives while giving directions; and providing information of a personal and informal nature, displaying sense of humor, and encouraging students to express ideas, and absence of negative affect.

In a review of 11 studies Kulik & McKeachie (1975) identified four commonly found factors: Skill, the ability to communicate material in an interesting way, to explain clearly, and to stimulate students' intellectual curiosity; Rapport, instructor's empathy, interaction with, and concern for students; Structure, organization and presentation of course material; and Overload, instructor's demands and student workload.

Feldman (1976) found that the characteristics perceived by students as associated with superior teachers were: stimulation of interest; clarity and understandableness; knowledge of subject matter; preparation for and organization of the course; enthusiasm for the subject matter and for teaching; and to a lesser extent, friendliness, helpfulness; and openness to others' opinions. The first two characteristics have been found most consistently.

Mintzes (1979) investigated teaching behavior of high rated psychology professors. These high rated instructors spoke expressively and emphatically, gave a preview of the lecture, used many examples of concepts, and addressed students individually by name.

In his overview of the literature of teaching behaviors associated with high student ratings Murray (1985) identified: enthusiasm; interaction; motivation of students; structure of course material; skilled presentation; mastery of subject content; consideration; and competence.

Abrami (1985) addressed the difference between dimensions of effective college teaching as determined by factor analytic studies vs. by the descriptive list studies. He noted that there was good agreement on Feldman's (1976) Cluster 1, Instructor's Presentation of Material (overall ability, clarity, etc.), and on Cluster 2, Instructor's Facilitation of Learning (friendliness, openness, etc.), but not on Cluster 3, Instructor's Regulation of Students (fairness, difficulty, etc.).

In summary, the characteristics, qualities, traits, etc., of "good" college instructors in relative order of importance include: communication, rapport, organization, and difficulty/workload.

Characteristics of "Most Outstanding," Award Winning, Instructor

Goldsmid, Gruber & Wilson (1977) analyzed the conferring of teaching awards process at the University of North Carolina. A content analysis of 978 supporting statements for the nominations indicated 2,900 supporting characteristics. The three most commonly mentioned characteristics of superior teachers were: concern for student mastery of course materials, treated their subject matter enthusiastically, and showed genuine interest in their students as persons.

Marsh (1977) reported a study in which graduating seniors nominated instructors who were "most outstanding" or "least outstanding." In the following year students evaluated 31 of the "most outstanding" and 31 of the "least outstanding" instructors previously nominated by the now graduated seniors. The "most outstanding" instructors were rated significantly higher on nine of 10 rating scale items. The nine variables on which the significant differences obtained were: Enthusiasm; Breadth; Organization; Interaction; Learning; Examinations; Assignments; Overall Instructor; and Overall Course, with the "most outstanding" instructors being superior on all. It was concluded that the validity of the current students' evaluations was confirmed by the previous independent groups of students' nominations of "most outstanding" and "least outstanding" instructors.

It is concluded that there is substantial overlap between the student-perceived characteristics of both "Good" instructors and also of "Most Outstanding" instructors. Secondly, it is concluded that the common characteristics across these two student perceived qualities of instruction include: communication; rapport; organization; enthusiasm; motivating students to learn, etc.

"Practical" Suggestions

Burhansstipanov, Giarratano & Portis (1989), in a student survey on six California State University campuses, identified nine specific behaviors as contributing to learning and 29 as detracting. Positive items included review sessions, giving examples, or telling stories, and explaining how the class relates to real life. Negative items included: instructors who express: bigotry; criticism; boring behavior; negative attitudes; condescending tone; and discouraging questions or comments.

Conclusions

Finally, it is concluded that the instructor teaching characteristics valued by students include instructor: communication; rapport; organization; enthusiasm; and motivating students to learn.

Secondly, student desired "practical" instructor behaviors include: review sessions; giving examples; and relating class content to real life. Student identified instructor undesired behaviors include: bigotry; boring behavior; negative attitudes; condescension; discouraging questions; and monotones.

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FACULTY TURNOVER: AN ANALYSIS BY RANK, GENDER, ETHNICITY AND REASON

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History

What is a normal turnover rate for faculty at any given university? Do gender, ethnicity, and salary compensation issues influence faculty decisions to leave?

At the University of Florida faculty salaries and financial exigency were central issues in 1992. All salaries across the Florida State University System (SUS) had been frozen for two consecutive fiscal years. These salary freezes began during fiscal year (FY) 1989 with a midyear reduction in the State of Florida's General Revenue Fund allocation and continued through two additional midyear reductions. This condition of financial exigency persisted in Florida into the next two academic years, leaving faculty without a salary increase for three consecutive years.

Other fiscal-related effects were experienced by the faculty: salary compression, inadequate research facilities, funding for a limited number of research and teaching assistants, and insufficient support staff. Some faculty complained that although they did not want to leave this University, there was a need to seek employment elsewhere, using a new job offer as leverage in order to win a salary increase as an inducement to remain. Yet even in those instances where such an increase was granted and written into contract, the increase was delayed indefinitely because of the state workers' salary freeze.

An empirical analysis of the turnover at the University was proposed to address four questions. First, was the University experiencing an exceptionally high rate of faculty turnover? Second, was the turnover group disproportionately weighted by demographic factors of gender or ethnic background? Third, what were the reasons given by the faculty who left? Fourth, was turnover influenced by faculty rank?

Predictor Variables of Faculty Turnover

A review of the literature led to the conclusion that certain segments within the faculty of an institution will turnover in greater proportions than other segments for reasons that differ depending on rank or gender. However, much of the body of literature on faculty turnover was contradictory or unclear. Based on the findings reported below, assistant professors, untenured professors, and faculty whose academic careers were young were those most likely to turnover (Christal & Hector, 1980; Ehrenberg, Kasper,& Rees, 1991; Smart, 1990). Gender, ethnicity, and salary were variables that were reported as being inconclusive as indicators. Some research has been reported as showing that, at the full professor level, men were more likely to leave than women, and there was no gender difference at lower faculty ranks (Ehrenberg et al.; Smart). Other researchers have reported greater attrition for women and for members of ethnic minority groups (Hensel, 1991; Stepina & Campbell, 1987). In some studies, salary was found to be given as a significant reason for leaving only by assistant professors, not by those of higher rank (Ehrenberg et al.; Smart); however, in Weiler's (1985) study of associate and full professors, salary was rated as a very important reason to leave by a sizable proportion. The prestige of an institution was reported to be a variable that influenced turnover in different directions depending on faculty rank (Ehrenberg et al.; McGee & Ford, 1987; Weiler).

Ehrenberg, Kasper and Rees studied faculty turnover using American Association of University Professors (AAUP) data from two decades of the AAUP annual faculty survey, reporting little variation in turnover rates across time or type of institution. At doctoral-granting institutions, the annual retention rate ranged from 89-92% for full professors, 89-93% for associates, and 81-86% for assistant professors. Faculty salaries as a variable were found to be significant only in the retention of assistant and associate professors, not full professors, and the magnitude of the relationship was reported to be small. The relative prestige of an institution was reported to be a significant variable whose direction varied according to faculty rank. At more prestigious institutions, the retention of assistant professors was reported to be higher than at lower-rated institutions, but lower for associate and full professors. Gender was reported to be a significant variable only at the full professor level; at that level turnover was found to be greater among men. At lower faculty ranks there was no genderrelated difference, a finding reported also by Smart (1990).

Smart proposed a causal model of turnover based on the selfreported intentions to leave the employing university of faculty at 190 different institutions, both public and private, accumulating data from 2,648 respondents. He reported that faculty whose academic careers were relatively young were more likely to leave than those more seasoned within their careers. In fact, Smart reported finding career age to be the only exogenous variable having a significant, direct causal effect on the turnover intentions of both tenured and nontenured professors. Among tenured professors, men were reported to be more likely to leave than women, a relationship that was strongest among the tenured professors who were also the most productive in terms of research and publications. Marital status was not a significant predictor of turnover for either sex. In Smart's study, salary was only a significant turnover issue among non-tenured faculty, who as a group were also the lowest-paid.

McGee and Ford (1987) also surveyed faculty from a wide range of colleges and universities across the country, examining two characteristics of each faculty member: research productivity and self-reported intention to leave. They reported two significant predictors, and each was negatively correlated with a faculty member's intention to leave: the prestige of the employing institution and factors relating to the work environment. The work-related factors included extrinsic rewards such as salary and laboratory space, but also the degree of administrative influence wielded by faculty at the institution and the warmth of interpersonal relationships with colleagues and administrators. They concluded that "some determinants of faculty turnover are administratively controlled; thus, certain strategies may help keep faculty members" (p. 14). They noted that some strategies, such as encouraging greater faculty participation in governance, would be expected to decrease the time faculty spent on research; therefore, they concluded that a balance should be reached between strategies that encourage longevity at the institution and those that promote research productivity.

Weiler (1985) studied the actual turnover of associate and full professors at a single state-supported institution, the University of Minnesota. He reported that among this group, 63.1% rated personal factors as a very important reason for leaving; whereas, salary or salary potential received a very important rating by only 46.2%, and the reputation of the new employer was rated very important by only 29.2%. Weiler did not include assistant professors or entry-level faculty in this study.

Stepina and Campbell (1987) and Christal and Hector (1980) studied faculty attrition rates and tenure status within the entire State University System (SUS) of Florida. In Stepina and Campbell's analysis in terms of gender and ethnicity, men and members of ethnic majorities reportedly earned tenure at a higher rate than women and members of ethnic minorities. The tenure rate for men was reported to be 46% compared with 32% for women. Regarding ethnic background, the tenure rate was reported as 45% for whites, 27% for blacks, 25% for Hispanics, and 32% for other minorities. These authors concluded that the greater attrition of women and minority faculty could not be attributed to a negative tenure decision, because nearly one-third of newly-hired faculty had voluntarily terminated by the end of the third employment year, before being eligible for tenure. However, these disparate rates in tenure may suggest retention concerns for women and minority faculty based on Christal & Hector's analysis in which non-tenured professors were found to have the lowest retention rates.

Gender equality was the subject of Hensel's (1991) work. She reported that women in academe experienced higher attrition rates and lower career mobility than men, concluding that gender discrimination is a reality that still persists.

A Demographic Analysis of Faculty Turnover at The University of Florida

The scope of this study was an analysis of the attrition of persons holding academic positions at the University of Florida during a two-year period, FY 1989 through FY 1990. The Colleges of the University were individually surveyed using an instrument that targeted for analysis the demographic patterns of faculty turnover. The purpose was to attempt to explain the dynamics of turnover as concerned issues of climate and faculty support. It was proposed that an understanding of the dynamics would help to find solutions to any problems that were identified through this study.

Method

During the spring of 1992, the deans of all 13 Colleges of the University were surveyed by mail over the signature of the Provost. The survey collected data on two variables: first, the number of people who voluntarily left the University during FY 1989 and FY 1990; second, regarding each person who left, information about faculty rank, ethnicity (coded as White or Minority), the reason for leaving, and the quality of the move. For the purposes of this study, these definitions applied:

Reason for Leaving was defined and scored as one of the following:

a. the individual was moving for career enhancement within the discipline or to a similar college/university setting,
b. the individual left for a career change that could include movement to academic administration or private practice (primarily in the nursing and medical community) or to business and industry,
c. the individual left for family reasons, for education, or for unclassified reasons--other.

The Quality of the Move was defined and scored using six classifications of quality. The U.S. News and World Report (1991) annual edition ranking the top colleges and universities in the United States was used to objectively rate the quality of the institution. The classifications included whether the individual left for one of these reasons:

a. moved to an institution ranked in the top 25,
b. moved to an institution ranked as a peer with the University of Florida, which is in the top 50,
c. moved to a lower-ranked institution,
d. moved to an unranked institution,
e. went into business or industry,
f. went into private practice, or
g. entered employment in other areas.

The University of Florida Fact Book (1992) provided descriptive data about the population of all faculty at the University which totalled 3,022 Full Time Equivalents (FTE) in FY 1990.

The findings illuminated demographic trends in turnover when the survey results were compared with information from the Fact Book, including a comparison of the proportional membership of each group in the population of university faculty with the proportional representation among the turnover group of faculty who left the university.

Results and Discussion

Table 1
Faculty Turnover by College

College	Count	% in Turnover Group
Agriculture	12	5.74%
Achictecture	7	3.35%
Business Admin.	3	1.44%
Education	4	1.91%
Engineering	13	6.22%
Fine Arts	7	3.35%
Hlth/Human Perf.	6	2.87%
Journalism	2	0.96%
Lib. Arts/Science	3	15.31%
Law	1	0.48%
Medicine	93	44.50%
Nursing	12	5.74%

Table 1 shows that 209 faculty members departed the University during the period under study. This number comprises fewer than 7% of the total FTE faculty of the University. An overall retention rate of 93% was concluded to be high compared with what is reported in the literature (Ehrenberg, Kasper, & Rees); therefore, the turnover rate at the University was within an acceptable level.

The Colleges varied considerably in the number of faculty departing, ranging from a high in Medicine with 93 people leaving, or 44.5% of the total turnover, to a low in Law of one person, at 0.48% of the total. Liberal Arts faculty produced the second highest turnover (32 people, or 15.31% of the total). The Colleges of Agriculture, Veterinary Medicine, Engineering, and Nursing clustered in the middle range, while turnover was low at the Colleges of Journalism, Business Administration and Education.

Table 2
Faculty Turnover by Gender

Sex	Count	% Turnover Group	% All Faculty*
male	131	62.68%	84%
female	78	37.32%	16

N=209
*Source: University of Florida Fact Book, 1992.

The demographic descriptors of the persons leaving were examined next. Table 2 shows that women left in greater proportions than men, when comparing their composition among the faculty at large with those who departed the University. When compared with the percentage of women on the faculty as a whole, it appears that women left the University at more than twice the frequency of their total membership on the faculty, at 37.32% versus 16%. Men left the University at a lower rate; 84% of the faculty was comprised of men whereas only 63% of the turnover group was male.

Table 3
Turnover by Ethnic Background

Ethnic backqround faculty*	Count	% turnover qroup	% all faculty*
White	181	86.6%	90%
Minority	28	13.4%	10%

N=209
*Source: University of Florida Fact Book, 1992.

Table 3 shows the breakdown of faculty turnover by race. While the proportionate disparity by ethnic background was not as great as by gender, minorities were over-represented in the turnover group (13.4%) compared with their proportional presence in the faculty at large (10%). By extension, whites, comprising 90% of all faculty, were less likely to leave; only 86.6% of this category left.

Table 4
Turnover by Faculty Rank

Faculty rank	Count	% turnover group	% all faculty*
Full	35	16.75%	40%
Associate	56	26.79%	28%
Assistant	108	51.67%	25%
Other	10	4.78%	7%

N=209
*Source: University of Florida Fact Book

Table 4 shows the breakdown by academic rank for the total turnover group, comparing those percentages to the proportional makeup by rank of all faculty at the University. Table 4 shows that almost 52% of the faculty who left the University during the period of this study held the rank of assistant professor, a group that accounted for only 25% of the faculty as a whole. These findings support the conclusions of the body of literature reported above.

Table 5
Faculty Turnover by Rank by Gender

Rank	Men		Women	
	Count	% of men in turnover group	Count	% of women in turnover group
Full	27	20.61%	8	10.26%
Assoc.	36	27.48%	20	25.64%
Asst.	62	47.33%	46	58.97%
Other	6	4.58%	4	5.13%
	n=131		n=78	

The data showed that women were more likely to leave than men, minority group members were more likely to leave than whites and faculty at the assistant or lower ranking were more likely to leave than associates and full professors. Among full professors, men were twice as likely to leave as women, at the rate of 20.61% to 10.26%. In every respect but one, these findings were consistent with what was reported in the literature (Christal & Hector; Ehrenberg et al.; Hensel; Smart; Stepina & Campbell). The difference was in the finding that women in the lower ranks were more likely to leave than men at equal rank; women in this study left in proportions greater than their representation in the population. A second and complicating factor to the differences in turnover by gender was the over-representation of women at the assistant professor rank at the University, shown in Table 5. Tables 5 and 6 show that almost 59% of the women faculty and 54% of ethnic minority group members who left held rank at the assistant level. By comparison, a smaller percentage of the male faculty members who left and the majority group members were assistant professors, at the rate of 47% and 51% respectively.

Table 6
Faculty Rank by Ethnic Background

Rank	White		Minority	
	Count	% turnover group	Count	% turnover group
Full	32	17.68%	3	10.71%
Assoc.	49	27.07%	7	25.00%
Asst.	93	51.38%	15	53.57%
Other	7	3.87%	3	10.71%
	n=181		n=28	

Table 6 reflects the composition of the turnover group by rank and ethnic background. At the associate professor rank the percentages for ethnic groups were nearly uniform, 25.00% for minorities and 27.07% for whites. The percentages for those departing with the rank of full professor were lower for women and minorities than the general faculty in every category (20.61% men vs. 10.61% women; 17.68% white vs. 10.71% minorities).

Table 7
Reason for Leaving, Grouped by Gender and Ethnicity

Reason for leaving	All turnover group		Women	
	Count	Percentage	Count	Percentage
Career Move	48	22.97%	16	20.15%
Career Change	114	54.55%	34	43.59%

Family/Spouse	23	11.00%	13	16.67%
Education	13	06.22%	8	10.26%
Other	11	5.26%	7	8.97%
	N=209	9n=78		

Table 7 shows the reasons given for leaving the university by three different faculty groups: the total turnover group (All), the women who left, and the ethnic minorities departing. About 55% of all respondents left for a career change, a move to private practice, or a move to enter college and university administration. Another 23% moved to continue their academic career as it was performed at this University. A total of 23% left the University for education, family, or other reasons.

The responses and percentages for women indicated that their reasons for leaving were consistent with the responses of the total turnover group except in the areas of Family (16.67% for Women, 11% All), Education (10.26% for Women, 6.22% All), and Other (8.97% for Women, 5.26% All). The categories showing the greatest departure for minorities were Career Move (32.14% Minorities, 22.97% All), Family (17.86% Minorities, 11% All), and Other (10.71% Minorities, 5.26% All). Interestingly, the relative ordering of the categories was virtually the same for all three groups, with minorities only inverting **Education and Other** in the position of last two places compared with **Women and All**, and the groups **Women and All** were identical at every category. The differences between these three groups were of magnitude rather than of a complete difference in orientation.

Table 8
Quality of Move Grouped by Gender and Ethnic Background

Type of new position	All turnover group		Women		Minorities	
	Count	%	Count	%	Count	%
Top 25 institution	7	3.35%	3	3.85%	2	7.14%
Peer institution	14	6.70%	3	3.85%	2	7.14%
Lower-ranked than UF	47	22.49%	18	23.08%	7	25.00%
Unranked institution	19	9.09%	4	5.13%	1	3.57%
Business/Industry	37	17.70%	9	11.54%	6	21.43%
Private Practice	52	24.88%	18	23.08%	3	10.71%
Other	33	15.79%	23	29.49%	7	25.00%
	N=209		n=78		n=28	

For the variable Quality of Move as shown on Table 8, the largest turnover occurred in the category Private Practice; one-fourth of all faculty left for that reason. The second largest turnover of faculty, 17.7%, occurred among those pursuing opportunities in business and industry.

As seen in Table 8 above, about 10% of the total group moved to universities which were rated as being equivalent or better than the University of Florida (6.70% and 3.35%). More than three times this number moved to an institution rated lower or unrated (22.49% and 9.09%). The women who left were less likely to move to an equivalently ranked institution (3.85% vs. 6.70%) or to an unrated institution (5.13% vs. 9.09%), were less likely to have accepted employment in business and industry (11.54% vs. 17.70%), and were considerably more likely to have left for other reasons (29.49% vs. 15.79%). Interestingly, minorities were much more likely to have moved to a Top 25 institution (7.14% vs. 3.35%), to work in business and industry (21.43% vs. 17.70%), or for other reasons (25.00% vs. 15.79%). Minorities were much less likely to have moved to an unranked institution (3.57% vs. 9.09%) or entered private practice (10.71% vs. 24.88%).

DISCUSSION

The aggregate rate of faculty turnover at the University of Florida was found not to be excessive. However, women and members of ethnic minorities were leaving in disproportionately high numbers. The departing faculty's reasons for leaving were of interest. Forty-two percent left the University for work at another academic institution, but the other half left academia entirely: 43% of departing faculty entered employment in business, industry, or private practice. This finding was perhaps reflective of the fiscal climate in state-supported higher education which restricted increases in financial compensation to faculty. Very productive faculty may have been induced to leave academe because of the current economic climate. While this exodus may be a problem experienced at all major institutions of higher education, it is a serious problem that should be addressed by the University community.

Equally disturbing was the quality of the colleges or universities to which many of the departing faculty moved. Of the 77 persons who left and continued working in higher education, only 7 (9%) moved to a college or university ranked higher than the University of Florida, while 14 professors (18%) moved to institutions ranked on a par with the University. Unfortunately, more than three-fourths (76%) left for positions at higher education institutions ranked below the University or those institutions that were unranked. The fact that so many departing faculty are lured to less prestigious institutions should be troubling to the entire University community. One explanation is that institutions such as this University serve as training grounds for junior faculty who go on to higher-ranking positions at less prestigious institutions or who carry their expertise into positions outside the academic community. Women and minorities were less likely to move to a lower-ranking institution, a fact which may be attributed to greater opportunities for them because of the current impetus to achieve a more equitable demographic balance among faculty at quality institutions.

Only 16% of those who left held the rank of full professor or its equivalent, although 40% of the general faculty were ranked full professor or higher. Those holding the rank associate professor or equivalent left roughly in proportion to their numbers within the entire faculty: 28% of the University faculty held this rank, a rank which accounted for 27% of the faculty turnover. Proportionally, the largest number of departing faculty came from the rank of assistant professor or its equivalent; this fact was consistent with the findings in the body of literature. Though only one-fourth of the entire faculty held such a rank, more than twice that proportion which left during FY 1989 or FY 1990, or 52%, held this rank on departure.

The fact that the lowest ranking faculty members left in such proportionally large numbers might be explained by considering that more opportunities for advancement were available for those people. In light of these findings, the fiscal climate of this state, and the review of the literature, it may be concluded that the assistant professors were most vulnerable to persuasion by offers of higher compensation by another institution. However, as previously stated, only a small percentage of departing faculty left for advancement within the realm of higher education. Did this departure from academe result from frustration experienced within the role of university faculty, or was there an institutional explanation for the turnover? More research should examine possible solutions.

An interesting element of the turnover rate was the relative frequency with which minority and women faculty chose to leave the University, predominantly from the assistant professor ranks. Minority faculty departed the University in somewhat greater proportion to their total numbers on the faculty: 10% of the entire faculty was comprised of ethnic minorities, while 13% of the turnover group was comprised of minorities. Minority faculty in the turnover group were more likely to be ranked assistant professor or other and less likely to be full professors. In this respect, the ethnic variable operated similarly to gender: at the full and associate professor ranks, whites were more likely to leave than ethnic minorities, just as men were more likely to leave than women of equal rank.

Women faculty appear to be leaving university positions in extraordinarily large numbers. While women held 16% of the general faculty positions at the University, 36% of the faculty who left the University between 1989 and 1991 were women and almost 60% were at the rank of assistant, clearly a disproportionately high number. Furthermore, women faculty by and large left for reasons different from those of the men who left. Among all professors who left, 23% made a career move, compared with 20% of the women departing. Interestingly, 32% of minorities reported making a career move. Also, 55% of all departing faculty left for a career change or advancement within higher education, compared with only 44% of departing women and 35% of minorities.

CONCLUSIONS

Given the nature of the data collection, this study should be considered a preliminary report with several trends that should be investigated more fully. People do change jobs on a regular basis. However, in an institution such as the University, when one group of people leaves with greater frequency than others, there is need to ask if this is normal turnover. Faculty are leaving the academic community entirely. Assistant professors are leaving at a greater rate than faculty from other ranks. This is especially true for women and minorities. The following questions must be addressed: does a university have a responsibility for training junior faculty to assume positions at other institutions? Does the academic community have a responsibility for preparing professors for a career in business and industry?

Is there perhaps a deeper concern? Is there a culture-and climate issue wherein the majority group of tenured white males form a culture based on their own rules, and expect women and minorities to succeed by those same rules or by an even more stringent measure, in order to be accepted within the institution? This concern may be especially true for women faculty, who may decide that the resulting struggle to succeed is not worth the effort. The data from this study seem to support this contention. There is need to study the culture and climate issue as it relates specifically to women and minorities.

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LINKING THE FACULTY RECOGNITION PROCESS TO TEACHING EXCELLENCE

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Abstract

This session will discuss ways in which the faculty recognition process for retention, tenure, promotion, and merit salary increases can be positively linked to renewing faculty excellence in teaching. Utilizing criteria within faculty recognition documents, the use of students evaluations, evaluative conferences, and teaching observations to promote teaching excellence will be examined.

Introduction

Among the most difficult and critical decisions administrators face are those involving evaluative decisions in faculty recognition. The process and procedure for evaluating faculty for retention, tenure, promotion, and merit salary increases varies within and throughout institutions of higher education. The impact of these decisions on academic programs and the lives of each faculty person is profound. Curricular offerings, short and long term needs of students, budgetary concerns, and various internal influences within institutions have significant influence on faculty recognition decisions.

> Faculty evaluation is perhaps the most difficult task that confronts the music executive on an ongoing basis. Administrative decisions based upon various formal and informal evaluative and monitoring policies and procedures have a lasting effect on students, departmental and overall institutional quality, and the professional and personal lives of those who are being evaluated. (Hipp, 1983)

Many institutions evaluate faculty in three broad categories: teaching, research, and service. The manner in which each category is addressed by faculty may be affected by the stated mission of the institution or the academic unit. Nevertheless, the overall performance of a faculty member is determined through the evaluation of each evaluative category. Faculties in music units and other disciplines in the arts are usually evaluated in these categories as well as in the area of creativity. Creativity in music may include activities such as musical performance or composition.

In the past few years the current climate in academia among institutions has been gradually shifting towards emphasizing and promoting excellence in teaching as well as research. This shift is the result of many factors not the least being public perception of higher education. In addition, the work of individuals such as Ernest Boyer has opened the door for a much broader interpretation of research within higher education. This interpretation embraces the various activities that constitute teaching as a part of the research component. The perception that teaching is given more emphasis in the faculty recognition process in music is validated by the research of Shirk (1993) and Runnels (1993). During their study on sources and criteria used in evaluating music faculty the authors surveyed all the music executives of accredited National Association of Schools of Music member institutions from Region IX. The results of their research indicates that the importance of teaching reflected the highest mean percentage of emphasis music administrators assign within the total evaluative process of faculty recognition in music.

> Music executives rank in order of importance the evaluative areas of faculty recognition for applied music faculty, ensemble directors, and various combinations of applied, ensemble, and/or classroom as follows: (1) teaching; (2) creativity (performance, composition); (3) service (to the institution, community, and profession); and (4) research (publications, presentations). In addition, music executives perceive that institutional administration and music faculty rank faculty in a similar manner. (Shirk and Runnels, 1993)

In addition, music executives reported that teaching reflects the highest mean percentage of emphasis that upper administration and music faculty assign within the total evaluative process of faculty recognition.

Problem

Although there have been a number of research studies on the evaluation of faculty in higher education, and to some extent with music faculty in particular, there is a lack of information addressing how the faculty recognition process can be used to promote excellence in teaching. Too often evaluation is a process of finding what is wrong rather than what can be done to improve performance. The diverse roles that faculty are required to address often seem to leave little, if any, time for promoting excellence in teaching.

Purpose of the Presentation

This presentation seeks to provide some insight on how the different evaluative activities used in recognition decisions involving retention, tenure, promotion, and merit salary increases can be positively linked to renewing faculty excellence in teaching. The faculty recognition document, student evaluations, teaching evaluations, faculty recognition committee, chair (administrative head), and the evaluative conference can be utilized to improve and promote teaching excellence.

Faculty Recognition Document

The faculty recognition document is the yardstick by which evaluative activities proceed. It is important that the document is clearly understood and supported throughout the administrative hierarchy and with the faculty it addresses. Although the percentage of weight each evaluative area is given varies among and within institutions, teaching is without question one of the evaluative areas under consideration.

> Teaching involves the presentation of knowledge, information, and ideas by methods that include lecturing, discussion, assignment and recitation, demonstration, laboratory exercise, practical experience, direct consultation with students, and so forth. (Tucker, 1984)

Because teaching involves a diverse number of activities, it is recommended that these be addressed as sources of criteria in the faculty recognition documents. The emphasis which teaching is given within the evaluation document should reflect the importance which it is given within the division or department. If teaching excellence is linked to the faculty evaluation document, it should be given a total evaluative weight which reflects its importance. It is not uncommon to have 50% to 70% of the evaluative weight given to teaching within the total evaluative categories. To promote excellence in teaching, it is essential that faculty within the unit have embraced the concept that teaching is the most important activity within which faculty can engage. An excerpt from the faculty recognition document in the Division of Music illustrates the importance of teaching.

> The Division of Music has established at least 50% of the total evaluative weight in faculty recognition matters in music be assigned to teaching, at least 20% to research, performance,creativity, and at least 10% to service. Each faculty member may elect to have the remaining 20% of the evaluative weight put into any of the above categories at the beginning of the evaluative period..If a faculty member does not elect this option he/she will be evaluated 60% teaching, 20% research/creativity, and 20% service. (Shirk, J. D., 1993)

The development or revision of a faculty recognition document should allow for maximum faculty input and reflect a consensus of the faculty within the division or department before it is sent for consideration to the upper administration. The following is a result of faculty input and consensus and clearly indicates the importance of excellence in teaching.

> Teaching is central to the mission of Emporia State University. It is therefore the expectation that each faculty member within the Division of Music will excel in carrying out their responsibilities in teaching. In the Division of Music, the primary objectives consist of the teaching and making of music. (Shirk, J. D., 1993)

It is vital that teaching excellence be linked to documents regarding faculty recognition. By doing so the pathway is open to encourage excellence in teaching.

Role of the Chair in Evaluative Conferences

The chair or head of a division or department may utilize a number of methods to encourage and promote teaching excellence. One of the most direct and effective ways is through the evaluative conference. Evaluative conferences may be periodic (such as an annual review) or may occur with greater frequency. Whatever the circumstance, it is commonly accepted that evaluative conferences are generally presupposed to be threatening in one way or another. It is not uncommon for a faculty member to approach an evaluative conference with an attitude of anxiety, suspicion and apprehension. The chair must counteract this attitude in order to maximize the benefits of the evaluative conference.

It is of particular importance that the evaluative conference be somewhat predictable from both the chair's perspective and that of the faculty member. The chair may help to relieve the stress and anxiety of an evaluative conference if the context of the conference is clearly understood by the faculty member before the conference. For that reason it is recommended that the faculty member preview the evaluative document before the meeting occurs with the chair. It is extremely important that the document is clearly written and that any strengths and/or weaknesses be addressed in an objective manner. It is then possible to develop an atmosphere of trust before the evaluative conference begins.

The faculty evaluative conference can help bring goals and objectives of the division or department and the individual faculty member together. Certainly within the goal of promoting teaching excellence, this can be true. Developing an atmosphere of collegiality is developing an atmosphere of sharing. Although a large part of the chair's role in evaluative conference should consist of praising individuals whose teaching has demonstrated excellence, the chair should encourage and support those who need to achieve teaching excellence. It is not only important that the chair address strengths and weaknesses in all areas of faculty evaluation, but that he/she do so in a calm and factual fashion. It is important when addressing weaknesses to focus on the activity or lack of activity that is causing the problem, not the character of the person. An atmosphere of trust should be maintained.

> Chairpersons should be concerned with how faculty members can be brought together, and not just for transacting department business or assailing each other with reports of their research. Teaching is essentially a process of interaction and one develops teaching skills by exchanging ideas and practices. (Eble, 1990)

The evaluative conference should include suggestions, strategies or informational items which can help foster the development of teaching excellence. Information regarding teaching conferences, current research, and sources of financial support for teaching activities should be distributed to faculty on an ongoing basis, but can be particularly useful during the evaluative conference.

Student Evaluations

Assessment of teaching effectiveness must be established upon determination of characteristics of good teaching. Such determinations can be broad (Highet, 1959) defining a good teacher as one who knows the subject, has a sense of humor, and enjoys students. Other literature report detailed specific continuum of good teacher attributes ranging from concern with class size to the quality of teacher-imposed examinations (Bridges, Ware, Brown, & Greenwood, 1971; Feldman, 1988; Hildebrand 1973; and Wortruba & Wright, 1975). Shermon et al. (1987) identified five characteristics of excellence in teaching agreed upon by both faculty and students: enthusiasm, clarity, preparation, organization, stimulation, and knowledge. These latter characteristics served as a model for the Division of Music's recent revision of student evaluative tools. Student evaluations have long served the role as a major measure of teaching effectiveness. These evaluations can provide formative feedback to the instructor encouraging professional growth and development. Within a different venue, such evaluation also serve as a summative measure of teaching effectiveness, generally utilized in merit and promotion considerations (Arreola, & Aleamoni, 1990).

A music program has some unique considerations in teaching evaluation. Music faculty members typically instruct within one or more of three distinct venues: classroom instruction, ensemble rehearsal, and applied lessons. Classroom instruction is similar to academic counterparts. Ensemble rehearsals are concerned with, primarily, outcomes of technically proficient and musically stimulating public performances, much akin to theatrical productions and artistic exhibits. Applied lessons are conducted one-to-one; student outcomes include developing practical technical skills and strengthening musical understanding and interpretation. An additional outcome for most students is solo public performance.

In lieu of the diverse instructional situations, the Division of Music developed three distinct student evaluative tools (Appendix A) for course instruction, ensemble instruction, and applied lesson instruction. Division faculty had input into the development of these tools by means of initial discussion and constant review of the developing forms throughout the process.

Each evaluative tool is organized in similar and clearly defined topical sections (Arreola & Aleamoni, 1990). These different categories allow for more exact evaluative representation and serve to better aid in faculty instructional development. Positive statements were utilized throughout each tool. The fourth category, student self evaluation, provides an avenue for student ownership in the learning process.

The grading key is organized on a Likert scale format with pre-determined text explanations for the numbering system (Arreola, & Aleamoni, 1990). The two initial statements provide student demographics. These two statements, along with the three closing statements were mandated by Emporia State University for bias control. Each student also has the opportunity to complete (at his/her discretion) a free response for each course, ensemble, and applied lesson instruction (Appendix A).

Distribution, collection, and summarization of the student evaluations are processed in the office of the Associate Chair of the Division, removed from the central divisional office. Evaluations are administered approximately one month before the end of the semester. A procedural method is followed by all faculty members. Summarization services are provided by the University testing center. Results are transferred to a readable format (Appendix A). Faculty receive copies of the summarization form and all free responses after submission of final grades. Original copies are maintained in the divisional office.

Student evaluations are a consideration at the annual interview between the professor and division chair. These interviews are conducted in a positive, affirming manner. Together, the divisional chair and the faculty member explore all aspects of the student evaluations. Mutual agreement is attempted on plans for further teaching development.

Peer Evaluation

Student evaluative tools are one means of determining teaching effectiveness. Too often, these tools serve as the sole means of determination. Peer evaluation, in the form of instructional observations, presents a more concrete representation of the instructor. Peer observations are concerned, more often, with course objective and content, scholarship, and integration of the specific course into a divisional program (Centra & Bonesteel, 1990). Peer observers can effectively recognize the selection and organization of course content, and the utilization of teaching methods consistent with course material (Cohen & McKeachie, 1980).

The Division of Music utilizes peer evaluation as an aid to instructional development and improvement. Peer observers (members of the faculty-elected Faculty Recognition Committee) plan with the instructor date(s) for observation. One additional, unplanned observation is also conducted. Observers attend the first thirty minutes of a teaching session. All instructional formats (course, ensemble, and applied instruction) are observed. A single faculty member is observed by one member of the committee.

Evaluative comments are made upon a common divisional standardized form (Appendix A). This form utilizes a positive approach for the accumulation of observations. The Division Chair also visits at least one instructional session; the same form is utilized for evaluation. Peer evaluation forms are made available for merit and tenure decisions.

Self-Evaluation

The faculty participate in the evaluative process throughout the academic year. Each faculty member provides a self-evaluation by means of a division constructed form (Appendix A). This format provides a concrete personal assessment of the three forms of faculty evaluation-teaching, creative work, and service. Each faculty member also completes and submits Evidence for Evaluation consistent with Divisional guidelines and including:

1. a current vitae
2. completed student evaluation forms
3. faculty self-evaluation form
4. annual accumulative addition (University form)
5. written evidence of course development, teaching syllabi, and teaching materials.

The individual evidence for evaluation serves the portfolio model and aids in the preparation of tenure/promotional materials.

Faculty Recognition Committee

The Faculty Recognition Committee, comprised of five members three of whom are tenured, is elected annually by the division faculty. The FRC makes recommendations to the chair of the division regarding faculty recognition matters involving retention, tenure, and promotion. Recommendations to the chair of music regarding merit salary increases are made by this committee if approved by faculty vote each year (Shirk, J. D. & Miller, M. C., 1992).

FRC faculty members also conduct faculty peer evaluations. FRC evaluation is based upon the individual faculty portfolio, student evaluations, and peer evaluations. Each committee member individually reviews materials. Upon completion of the review, the FRC committee members individually rank each faculty (scale of 1-5) on teaching, creative progress, and service. Scores are averaged by the committee chair (elected by committee membership) and forwarded to the division chair.

Role of the Chair as Facilitator

The chair is responsible for allocating funds for faculty development and should use these funds to promote areas of faculty responsibility. Certainly the teaching component is an area which the chair can support to help promote teaching excellence.

Travel funds to workshops, seminars, conventions which focus upon teaching strategies, techniques and knowledge base can help to renew and sustain faculty interest in teaching. It is particularly important to assist faculty who need help in successfully addressing their teaching responsibilities.

The chair can certainly encourage and promote faculty excellence in teaching through ways other than monetary assistance for travel. Student secretarial support, graduate assistant support, flexible class scheduling, and equipment and supply allocations provide invaluable assistance.

Of utmost importance is the attitude and sincere interest that the chair communicates to faculty regarding teaching. The chair sets the tone and mood for the importance of teaching through his or her example in and outside of the classroom.

Role of Student, Self, Peer Evaluation, and Chair in the Promotion of Teaching Excellence

Each of the above examined evaluations attempts to give a clearer image of the teaching abilities of the faculty member. Student evaluations tend to examine the environment of the learning situation, student motivation and learning, and student reaction to instructor-implemented methods of delivery. Peer evaluations can more readily assess course development, content, and organization. Self-evaluation most often examines the teacher-related processes and methods. A combination of peer and self evaluations can reveal a dedication of the instructor and valuing of the subject matter.

The three evaluative tools can serve as a motivational impetus to the faculty member for further development of teaching excellence. These tools can effectively demonstrate good teaching qualities as well as direct one's attention to items requiring improvement. Likewise, these evaluative tools, managed over an extended period, can evidence the faculty member's growth and development.

Together the division chair, the individual instructor, and the division faculty can determine the weight and influence of these tools. With least emphasis, these tools provide information applicable to the promotion and tenure processes.

Recommendations

For increased effectiveness, examination of the evaluative results can aid in the determination of appropriate measures to continually advance and improve the faculty member's teaching effectiveness. Some suggestions follow:

1. allow for maximum faculty input within the department or division faculty recognition document to build consensus
2. address the importance of teaching in the faculty recognition document
3. assign a majority of the total percentage of faculty recognition to teaching
4. allow through the faculty recognition document faculty the flexibility to elect a larger percentage of the total evaluative weight to teaching
5. encourage an atmosphere of collegiality within any formal evaluative conference by the chair and faculty
6. allow for faculty to receive evaluative letters before any evaluative conference by the chair and individual faculty member
7. encouraged observation of teaching models (within or outside the division
8. the development of faculty enrichment programs, workshops, and instructional sessions
9. the organization of a faculty mentoring program
10. faculty-guided preparation of media materials (especially applicable in a multi-sectional course)
11. organization of small informal faculty discussions about effective teaching practices
12. organization of informal discussions centered around common teaching concerns
13. encouragement to consult supportive nonevaluative colleagues about teaching processes (Lucas, 1989; McKeachie, 1982; Tucker, 1984)

Note: To obtain a copy of the Course Evaluation Form,, contact the writers directly at Emporia State University. See author reference.

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PART-TIME FACULTY EVALUATION:
A campus case study

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Abstract

During each of the past 13 years, the Verde Valley Campus of Yavapai College in Arizona has used the same system of part-time faculty evaluation. The system includes a standard student evaluation, an administration in-class evaluation and self-analysis evaluation. The presenter,, who devised the system, will discuss its evolution and his perceptions of its impact on instruction.

Introduction

Most community colleges are or will be facing three major issues in the near future, Outcomes Assessment, Information, and Total Quality "Something". With these new challenges looming on the horizon, it is worth reflecting on the things done well that shaped our current paradigms before one proceeds and loses processes and people. This summary is part of that reflection.

Site

Yavapai College, Verde Valley Campus is a branch campus of Yavapai College. In addition, there is a campus in Prescott, Arizona and an extension site in Chino Valley. Numerous other locations within the county serve as temporary extension class sites. The district office in Prescott, is in conjunction with the campus. The Verde Valley Campus is located in a desert-climate valley about 90 miles north of Phoenix and 60 miles south of Flagstaff. The campus serves a diverse population of approximately 40,000 people. The largest population centers are Sedona and Cottonwood. Each of these communities has a population of approximately 12,000. The remaining population is located in numerous small communities throughout the valley. Many of the most scenic areas of Arizona are found within the Verde Valley including the city of Sedona and the surrounding red rock area. The Verde River, the only river in Arizona to have its origin in Arizona, flows through the valley. The Verde Valley Campus is the only higher educational institution located in the area and serves the adult population of the nearly 40,000 valley residents. The two local high schools have no adult education programs. Some local agencies, primarily libraries and citizen volunteer groups, provide literacy and English as a Second Language (ESL) services. There are numerous profit-seeking individuals who deliver non-credit continuing education to all ages from children through retirement. There are a few non-profit agencies providing culturally related educational opportunities in arts, music and theater. The valley is noted for its scenic beauty which attracts many people wishing to retire in a rural culturally-rich area.

Yavapai College has served the Verde Valley since the founding of the college in the latter part of the 1960's. The first buildings were constructed on the 120 acre site in 1976. It wasn't until 1985 that significant additional construction took place. Prior to 1985, the college used many off-campus sites for instruction and for the location of its offices. As Arizona focuses its responsibility on the delivery of education directly to its clients, the college has used numerous leases sites for classes. This has included both elementary and secondary schools as well as other suitable places throughout the valley. Many public service classes were and are still offered in fire stations and emergency medical facilities. The current student population is about 1500 headcount with about 200 of the students attending on a full-time basis. This number translates into about 500+ full-time equivalent students (FTSE). The mean age of the student body is between 38 and 40 years of age. Most students take only one or two courses and all students are commuters. The academic schedule contains approximately 210 to 230 credit bearing classes. The campus does not offer many non-credit courses. The most common degree emphasis is liberal arts, with office administration and computer science as secondary study areas. The campus graduates about 40 students each year in degree and certificate programs.

The college campus is staffed by 14 full-time faculty and 100 to 110 part-time faculty. There is one full-time instructional administrator and one student services administrator supervised by a dean of instruction and student services. There are twenty other full-time support and professional staff and many part-time.

History and Development
Beginning as an extension program with a focus on the retired population of the Valley, the Verde Valley Campus offered about 50 percent of its program in general interest courses in the early 1980's. By the middle of the 1980s the campus offerings showed a decline in general interest courses and an increase in the application of computer science and business classes. In the late 1980s to the current year, the campus function is general education, liberal arts, business and computer sciences and general interest courses. Whereas general interest courses comprised almost 50 percent of the enrollment in 1980, these same types of offerings constitute less that 18% of the offerings currently. During that same period, of twelve to thirteen years, the full-time equivalent student (FTSE) increased from approximately 80 to over 500.

Involvement
In 1979, the writer joined the staff of Yavapai College as an extension program director and in July of 1981, transferred to the Verde Valley Campus as the instructional administrator. While an extension director the writer obtained the form "Instructional Evaluation by Students" and used the evaluation to determine the nature of problems in specific classes. The Verde Valley Campus had already been promoting the same concept and was, in fact, using the same instruments of evaluation. The instruments were:

1. Instructional Evaluation by Students for student input;
2. Instructional Evaluation for administrator in-class evaluation and for faculty self-evaluation response.

Although the instruments were not unique, the philosophy of the process used by both administrators was. Why would one want to evaluate part-time faculty?

Some considerations for evaluation of part-time faculty include:

1. Customers demand quality control and this process proves that you are also interested in quality control.
2. Institutional policies demand it and one wants to be in alignment with policy.
3. Part-time faculty have concerns, want to improve, and by providing feedback they will be better.
4. Working with part-time faculty in a positive way forms a bond between faculty and the institution.

In general, other segments of Yavapai College were, and are, currently using the evaluation to assist in personnel decisions. The instruments were being used to detect problems in instruction and to assist faculty in correcting them to improve the quality of instruction. To this date, Yavapai College, uses the Instructional Evaluation and another student instrument the Student Instructional Report, the (SIR), from Educational Testing Service (ETS) for the evaluation of full-time faculty. Until 1990 only the evaluation system for full-time instructors was contained in college policy. Although the instruments together can assist in improving instruction, there is no system established at the college to assist instructors to improve even if deficits are detected. The responsibility for assistance lies with the division chairperson or a full-time instructor.

The administrators involved in evaluation on the Verde Valley Campus used the Instructional Evaluation by Students and the Instructional Evaluation to provide immediate feedback to part-time faculty, (not then covered under the evaluation policy of the college) to improve their instruction. Both administrators had extensive backgrounds not only as faculty but as instructional administrators with observation and formal education in instructional supervision. Unlike the full-time evaluation, the philosophy of the part-time faculty evaluation system was primarily to improve the quality of instruction for each faculty member evaluated. The evaluation process was therefore:

1. A caring system
2. A personalized system
3. A helpful system
4. A confidential system

Process

The following elements were pursued:

1. Part-time faculty were informed evaluations would be completed, given information about the instrument and provided the opportunity to discuss the philosophy of the evaluation system.
2. Part-time faculty were informed that the time and date of evaluations would be unannounced. They were given the opportunity to schedule for an evaluation if they chose. Most evaluations were completed between the sixth week of classes and the end of the semester. Evaluations were generally not scheduled during review or final examination times.
3. Part-time faculty were informed that they, as faculty, had the right to refuse evaluation at any given class time, but would be subject to a scheduled evaluation at some other time.
4. Part-time faculty were assured that the total evaluation would take place within a week to ten days and would include:
    a. an in-class evaluation by an observer.
    b. an opportunity for the individual faculty member to respond to the evaluation of the observer.
    c. a student evaluation of the instruction at the same time as the observation, and
    d. a follow-up meeting with the observer to analyze the total evaluation and process.
5. Evaluations, unless not mutually agreed upon by the faculty member and the observer, would be filed in the faculty member's personnel file.

Whenever necessary and possible, the instruments were used together in an instructor's class. This resulted in conducting an in-class evaluation, having students complete an evaluation of the instructor, and having the instructor respond to the in-class evaluation with their own impressions. The information was consolidated and reviewed by the administrator and the instructor in a meeting prior to the instructor's next class. In this way, information received by the instructor and the recommendations from the conference between the instructor and the evaluator could be weighed and implemented.

It was the belief that many evaluation systems fail because they are completed at the end of the semester and only determine what has happened. Quality improvement evaluations must provide the opportunity to react with measures to improve within the same environment. They may not apply to different classes in different environments and in different semesters.

Samples and Examples

Although hundreds of part-time instructors have been evaluated, there is something new to be learned from each one of them. Sharing the information with the instructors enables the evaluator to utilize information similar to the situation in which an instructor can learn from their students. During the academic year of 1986-87 evaluations were completed on most of the instructors in the Coconino County District of the college. Although crude statistically, a summary report for 30 instructors for the fall 1986 semester was completed and the data were used to establish a base line. At that time the questionnaire was divided into two sections, 8 questions on the course and 10 questions on the instructor.

Currently

The Assistant Dean for Instruction, has submitted a proposal to allow for the evaluation of all part-time faculty during the academic year 1994-95. If funded, an additional consolidated report including more than 150 faculty members will be available. By combining data from student evaluations, on a district-wide basis, comparisons can begin to be made for a variety of conditions, subjects and individual instructional styles. There is however a move to change the evaluation instruments in some areas of the college district.

Samples of the forms and three student response results are included as appendices to this summary. The student responses are for individual faculty members who seemed to be in the high, medium and low response categories.

Outcomes and Conclusions

Both the instruments, the Instructional Evaluation by Students and the Instructional Evaluation, are unique in that they seem to focus on the aspects of instruction targeted by Gilles Nadeau in 1977 and reiterated in a stimulating speech presented by Charles Waldo entitled "Putting the Zi-factor to Work for You" presented at this national conference in 1988. The uniqueness lies in the ability of students to respond to the questions of the instruments and the parallel aspects of the student instrument to the in-class observation instrument. The other aspect is that it addresses the questions regarding faculty related to specific paradigms. These are:

1. Organizational clarity--today the college requires that part-time faculty develop a contract with the students in the form of a syllabus. for all new faculty there is an all-day workshop on organization, the syllabus, its elements and the first day of class.
2. Analysis/synthesis--part-time faculty who work in the real world and teach about their work seldom lack perceptions about application of classroom presentations to opportunities outside the classroom. Faculty who are part-time and teach theoretical courses find difficulty with associating theory to practice.
3. Effective communication with the class. The college is entering this area as an important topic for communication. Recently, much thinking was stirred by ppresenting a short workshop on difference in communication by gender.
4. Effective communications with individuals. Adult students usually have many other persons to communicate with beyond the classroom. It is important that faculty concentrate much of their effort on the subject in individual discussion.
5. 'Enthusiasm--George Waldo (1988) called this the "Zi-factor". When a faculty member is excited about teaching and the subject, that faculty member performs in the classroom.

The instruments do not ask questions that students may not have the basis from which to respond. This includes questions related to materials and text or knowledge basis of the instructor.

Over time, it was discovered and accepted that students were very honest about the instructor and the course. There was also a close comparison between what students indicated and what the observer thought was viewed. This result parallels the findings of the writer's in the study, Community College Part-time Faculty Self-Perceptions of Teaching Performance (Williams, 1991).

Completing part-time faculty evaluation is important if:

1. the instruments collect the proper information.
2. the results of the evaluation are truly reviewed.
3. prescription for improvement is available.
4. the institution wants part-time faculty to feel important in what they do and be able to improve teaching.
5. the institution wants the clients (the students) to feel that they have some part in institutional change and control over their own learning environment.

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TEACHING

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REIGNITING THE FLAME:
TQM TACTICS FOR FACULTY REJUVENATION

FROM TAYLOR TO DEMMING:
SYSTEMS APPROACH AND THE DEPARTMENT–A CASE

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Abstract

The presenter will discuss several successful strategies for restoring faculty enthusiasm and commitment to teaching excellence, derived largely from TQM principles. The Ursinus approach recasts the marketing imperative of the '90s as a powerful tool for campus coalescence and reinvigoration, rather than as an unwanted distraction. Specific TQM-based interventions and their intended and unintended outcomes will be described. Future applications will be explored.

Introduction

America invented management. In the first two decades of this century, the research and writing of Frederick Winslow Taylor and his disciples defined the principles of business administration for what they thought would be "America's century." From Taylor's initial study of the component parts of pig-iron shoveling through Galbraiths' time-motion studies, the Taylorites were obsessed with detailed statistical analyses as a means of discovering the "one-best-way" to perform any industrial task. While they have received criticism for limiting worker autonomy by their narrow job descriptions, Taylor, himself, moved quickly to a systems approach evidenced in his Principles of Scientific Management (1911). Many of his followers, such as Henry Gantt, who developed the PERT chart and Walter Rautenstrauch, who created the time-line, also wished to understand the whole industrial enterprise.

It is, at least, ironic that at the end of the century we look to Japan to relearn the management principles we invented at the beginning of the century. In management courses W. Edwards Demming has become our guide to "statistical quality control," "learning organizations," and "quality circles." The real message of TQM has been "about developing the capacity of a system to do what its members actually want it to do," seeing with clarity what the true goals of any organization are, fostering methods of continual learning about the system, and using the information about the system to improve the quality of the system.

Outcomes Assessment

In American higher education, the dreaded "outcomes assessment" has been the conceptual catalyst for propelling colleges to look at "what its members actually want it to do." Outcomes assessment is a shorthand for systems thinking. A fundamental problem with outcomes assessment is that higher education has been trained to disassemble problems. In my own field, American history, research has been carried out on ever narrowing subjects; journals are filled with studies so detailed that few people bother to read them. Management began with Taylor's efforts to break work into its smallest component parts and reassemble them in the most efficient way of performing any task. The resulting fragmentation of this analysis has left us unable to see the consequences of our actions.

Now, we are called upon to be accountable for the outcomes of our systems. Accrediting agencies are requiring that we take account of the results/outcomes of what we do; our Southern colleagues are quite aware of the need to assess outcomes, those of us in the Middle States and North Central region are rapidly learning. Our publics, be they public (i.e., state legislatures) or private (i.e., middle class families making individual decisions based on assessment of cost/benefit ratios) are holding us to new levels of accountability.

I, as a result, want to describe "systems thinking" at the departmental level to illustrate how thinking about the whole allows us to see the interconnectedness of our actions at various places in the system. Specifically, the Ursinus biology department has redesigned itself in significant ways in the past five years through a process of critically evaluating its system of educating its students.

The department has long enjoyed a regional reputation for pre-medical training. This reputation and the desire to protect it long governed the unarticulated goals the biology faculty held for their department. These goals followed traditional and predictable patterns. Indeed, the department was governed more by assumptions than by desired outcomes; more by biases than by educational philosophy . Terminology which were used to describe what was done follows: coverage, challenging, rigorous courses, demanding, competitive, and serious. Phrases included "students should learn how to read a science text and figure things out on their own"; "the cream will rise to the top"; "undergraduates can't do research"; and "our job is teaching."

The outcomes, at least in terms of what became of freshmen students, were also predictable. Few freshmen who wished to become doctors achieved their goal. Rather than achieving their initial goal, 33% left Ursinus, and 33% declared another major. In the end 15% were going to medical, dental or vet school, 5% to graduate school, and 15% found jobs related or unrelated to biology.

For a variety of reasons, the department redefined its goals for entering students. Indeed, the department really defined their goals for the first time. The redefinition was governed in part by consideration of the College's marketing needs, by the changing external environment, and by its internal perception of quality. The College stated a goal of retaining 90% of its freshmen. The department could reasonably be expected to retain at least half of its freshmen as majors. At the same time, it aimed to retain a higher percentage, the department raised its expectations as to where they would end. Perhaps most significantly the department defined a goal of sending one-third of its majors to graduate school and one-third to medical school.

Realizations

The most significant challenge was answering the question how do you get more students into graduate school? This involved changing the aspirations of students. What were we doing to encourage grad school aspirations? Graduate school flyers were posted on the department bulletin board, and department faculty stood ready and eager to talk to students about graduate school when they approached us. This was the career counselling equivalent of the cream rises to the top bias. Briefly, the faculty leaders realized that in order to change the outcomes we must change students' self-perception. (This came only after facing the reality that demanding more highly motivated students from Admissions was not the winning answer.) We concluded that what was needed was to get students to think of themselves as biologists. For students to think of themselves as biologists, not student of biology, required them to do biology. This became the crucial goal.

How would we get students to do biology? Biology is a hands-on discipline. It is done in the lab and in the field. Facts and concepts are interdependent; Darwin formulated the most important unifying concept in biology, not by sitting home thinking brilliant thoughts (or memorizing textbooks) but by studying the taxonomy of beetles. Our traditional assumptions had systematically excluded all majors from doing biology until their senior year (and then only relatively few were allowed access). By then their aspirations were set. We came to realize, also, that success in getting more students doing biology might improve our chances of achieving other goals, including retention.

Our system would have to change if we were to be successful in the strategy of getting more biology majors involved in research. Four critical areas were identified in the system: (a) faculty development, (b) space, (c) students' attitudes, and (d) students' skills.

We have had a faculty development program in place for over a decade and have paid considerable attention to issues of faculty development. In Faculty Development in Liberal Arts Colleges: An Unfinished Agenda for the 80's, I concluded that "if the first phase of faculty development was motivated by a concern for students, and the second phase was impelled by a concern for faculty, the next stage will be driven by a concern for the institution. If the focus of phase one was teaching and phase two was on comprehensive development, the unfinished agenda is the curriculum." This remains true. Student research, embedded in the curriculum, not only serves institutional curricular needs, it justifies the investment of faculty development dollars in support of individual faculty research. In the doing of biology, research and teaching is merged. We no longer need to ask scholars about the connection of their research to their teaching.

The second realization was that "doing" biology required different (and more) space as well as instrumentation. Obviously, the institution needs to be prepared to deal with the costs if it is to utilize this direction. Equally obvious should be the realization that departments are a part of the institutional system. That is to say (a) departmental goals need to align with the institution's mission and capacity to support the department, and (b) not all intrinsic goods are affordable. Without attempting to minimize the difficulties involved, the problems of faculty and facilities development result in the need for additional budget.

The more difficult problems relate to teaching and learning. If undergraduates are to be involved in research in ways that influenced their attitudes about career choice and the nature of inquiry, serious research would need to begin no later than their junior year. Thus, sophomore level courses were altered; at this point would be certain that students attained required methodological skills and exposure to instrumentation. Serious research began at this level through one-credit research courses.

Finally, we realized that we must get students to think differently beginning in their freshman year. Notice that the systems approach, which started with goals and outcomes led back to the introductory course in the discipline. Time does not allow a discussion of how that course has evolved. Descriptors in the revised course, however, give clear indication of what we are now trying to accomplish. They include: "proactive learning"; "interaction in the classroom"; "read, think and learn"; "great writing"; and "concepts." Next year internet discussion groups will be added.

Changes

To more deliberately attempt to modify student attitudes, the department instituted several non-curricular changes. They range from department tee-shirts to a biology residence hall, from department picnics to a weekly common hour with outside speakers and student papers.

The changes have brought the desired results. From introduction biology, the College is now retaining over 90%, the department is retaining well over one-half. Of those remaining in biology, in 1993-94, one-third went to graduate school, one-third to med school, and one-third to employment. More importantly, 22 student-biologists presented papers at the Pennsylvania Academy of Science meetings in the spring. This result was beyond that of Pennsylvania State University, land-grant university, or the University of Pennsylvania, or any other college or university in the State.

REIGNITING THE FLAME:
TQM TACTICS FOR FACULTY REJUVENATION

FROM TAYLOR TO DEMMING:
SYSTEMS APPROACH AND THE DEPARTMENT–A CASE

Transforming the Marketing Imperative into a Career Boost
(Maybe you can turn a sow's ear into a silk purse!)

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Abstract

The presenter will discuss several successful strategies for restoring faculty enthusiasm and commitment to teaching excellence, derived largely from TQM principles. The Ursinus approach recasts the marketing imperative of the '90s as a powerful tool for campus coalescence and reinvigoration, rather than as an unwanted distraction. Specific TQM-based interventions and their intended and unintended outcomes will be described. Future applications will be explored.

Introduction

We can all readily agree that times are exceedingly difficult for institutions of higher learning. In the 90's, economic, demographic, and attitudinal factors appear at to be conspiring against colleges and universities. Some argue that the cost is too much and provides too little. Such attacks can put even solid, worthy organizations on the defensive. In many respects the most difficult challenge for college administrators involves deciding how much to filter the facts. It is necessary to gauge carefully what information can be shared, in order to motivate faculty and staff. Protective administrators, who avoid transmitting bad news to colleagues, may be missing a valuable opportunity to enhance motivation on their campuses.

Interventions

There is evidence of rampant denial on campuses today. Rather than face the challenges squarely, many professors effect a hasty retreat to ivory towers, insisting that things haven't really changed, and business-as-usual will suffice. They continue to grumble about tight budgets, assuming that the sinister administration is to blame for being a stingy, withholding parent. Talk of budget crises is viewed with suspicion as a manipulative ploy on the part of deans to quiet the masses.

Others prefer a defensive style of displacement and projection. They'll grant that times are tight, and that resources are dwindling, but frustration and anxiety are directed in ways that are not that productive. They get absorbed in territorial skirmishes with fellow faculty and wage a variety of interdepartmental and interdivisional wars. Resultingly, these times benefit from campus cooperation and collaboration.

What needs to be done? An edict demanding a less defensive, more productive posture isn't necessarily ideal, since faculty members are notorious for responding badly to orders. Additional work assignments are viewed as extraordinarily burdensome when they're seen as cutting into the scarce time you have on this earth for truly Important with a capital "I" scholarly accomplishments.

The rather miraculous thing is the fact that despite opposition to orders and resistance to authority, the campus work place works well. The key to rejuvenating faculty for an optimal response to today's special challenges is to help faculty arrive at their own conclusion that self-improvement is a necessity, rather than an option.

Ursinus has been quite successful in doing these things. A review of the management literature on total quality management provided some early in its use for us. The TQM focus on consumer-centeredness paralleled the student-centered emphasis on our campus. The highly participative TQM approach to improvement mirrored

Ursinus' collegial style of managing. TQM's emphasis on measuring performance was more new to us, but certainly not alien to those in the social and natural science disciplines. The value of the TQM framework had less to do with its introducing any revolutionary new tactics, than with a subtle reorientation that studying the TQM mindset permitted. TQM concepts made it easier to accept the idea that acknowledging the pressures of the marketplace is ultimately not only necessary but good for a school. It's not a sign of selling out and compromising educational ideals: it's a reflection of respecting the interdependent nature of our enterprise. We need our students and their parents, as much as they need us. Responding to their real needs will make us better and will permit more effective mutual functioning. In looking more carefully and flexibly at the market, we may even discover a larger role for colleges and universities than we had originally occupied. The chance to change should be seen as an opportunity for growth, not as a threat. Examining what the world needs us to do today, and assessing how well we deliver on our promises, will make us better and responsive.

Attention to qualities that make Ursinus distinctive has led to increased development of these specialty programs. We're already known nationally for providing solid premedical training; now we're discovering the high rate of success of our alumni who go on to law school, graduate study in psychology, and other professional careers. Since so many applicants are looking beyond their bachelor's degree, they're attracted to our programs because they actively guide students through the entire preprofessional process. The marketing perspective motivated a renewed commitment to careful tracking of each of our students, which in turn enhanced the undergraduate experience. The name of the game is trying to beat yourself and trying to do it even a little better next year! As long as realistic incremental steps are established, this strategy can be very satisfying. It clearly operates best when faculty have a high level of ownership and control of the new projects created. "Trust them, convince them the need is real, be supportive, and they'll develop fine, innovative programs. Mistrust them, look over their shoulders, and the enthusiasm needed for their effective interactions with students will die. Students don't enjoy paranoid professors; they will flee."

The Ursinus administration has relied heavily on increased informal meetings among subgroups, assisting all to feel a bit like an insider. This has built a sense of trust, common purpose, and commitment. Negative news has been shared in a modulated way, awakening without alarming. As a result, faculty have heard the message and have shown initiative in developing new ways of showcasing their work. They have organized conferences to bring the campus greater visibility. Others have become heavily involved in recruiting new students. All have committed to more faithful performance of the mentor role to students, as evidenced by a dramatic increase in successful undergraduate research projects. This is very much an ongoing process, and we certainly don't envision an end to our emphasis on continuous quality improvement.

Outcomes

Once these steps have been taken, the good news is that responding to today's demand for greater accountability can make teaching far more interesting and exciting. In college teaching one deals with constantly with intangibles. In a manner removed from ongoing peer review, one lacks a clear yardstick for self-assessment. We respond to this by developing private means of measuring success, and take pride in the new classroom tools regularly developed, but this leaves our efforts terribly reliant on self-reinforcement. As internally directed as many faculty are, over time it's difficult to maintain the momentum. When we started our teaching careers, every class meeting was crucial and elicited emotion (even nausea!). As we got down the routine, that's what it became: more routine. To reignite the old enthusiasm, we need an excuse to care about performance the way we did in our untenured days.

As distasteful as marketing is to many academics, the advantage of the marketing orientation our institutions must adopt today is that in "selling" what we do, we are forced to examine its merit, carefully inspect our efforts for strengths and weaknesses, and articulate our accomplishments in a broader arena. Often this translates to getting greater recognition for good, hard work. Faculty like getting A's, they always did (or they probably wouldn't have been the successful students they were required to be to succeed in academe).

The new job requirement for faculty, that they must be prepared more so than before to package and parade their achievements before the public, can be powerfully reinforcing for faculty. It can serve as a new impetus for setting ambitious standards and meeting them. Attention works wonders. Our faculty members are already doing more than we often realize. To a large extent, they really are these self-actualizing, inner directed, hard-working, creative people who care passionately about their disciplines and their students. Our coming to them for their help in convincing the world of the value of what they are doing in their interactions with students can give them a valuable chance they deserve. The new demand for outcomes assessment can motivate innovation and promote a fresh perspective on how to work optimally with students at each stage of the educational process to obtain the most desirable results.

An emphasis on outcomes assessment in teaching can often lead to an interesting quandary. Since measuring educational outcome is already an integral part of every course, it makes sense to use grades as a reflection of teaching effectiveness. The irony is that when we work harder to engage ALL our students, and succeed in helping all do better, when our average grades rise, we feel guilty of committing the sin of inflating grades. Although grade inflation is a problem, rising grades can actually be proof of the progress been made.

In trying to use the marketing imperative discussed to revitalize faculty, I developed the **Distinctive Teaching Survey**. It was incorporated into the usual annual self-evaluation process conducted at Ursinus College. Faculty in departments were asked to reflect on their teaching, and to share what makes their particular courses distinctive and how they would best differentiate them from comparable courses offered at other schools. The survey provided them with a vehicle for expressing private accomplishments of which they were appropriately very proud.

This survey permitted the faculty to communicate efficiently about their peak moments in the classroom. It provided a clearer picture of the great things going on in the department, which makes communication with students, the administration, and external audiences far easier. This survey represents one of a myriad of approaches that can be taken to help articulate the quality of what we are doing to the outside community, while simultaneously increasing our internal awareness of campus strengths. This can contribute to an increase in the general sense of pride in the institution, which creates a climate that fosters greater productivity.

If done appropriately in higher education, the changes faculty will need to make to help their institutions survive the 90's will pay off for them handsomely. Their ongoing accomplishments will be more responsively recognized and lauded, and they will have a clearer reason to improve upon their delivery of services both consciously and continuously. Faculty will convince us, themselves, and eventually even the outside world, that what they do is precious and good and valuable and worthy, ...and hopefully put to rest for once and for all those dopey jokes about "those who can't do, teach"!

For a copy of the Distinctive Teaching Survey contact Dr. Catherine Chambliss, Dept. of Psychology, Ursinus College.

USING PROFESSIONAL SOFTWARE TO ENHANCE TEACHING EXCELLENCE

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Abstract

Commitment to teaching excellence is enhanced when innovative and creative methods are introduced into the education setting. This presentation illustrates how professional and presentation software is used in an educational environment to enhance the learning experience. This approach, applied in both post-graduate and continuing professional education classes, reinforces concepts, stimulates interest, and reduces repetitive efforts by students. Student/teacher mentoring is also an ingredient of the project.

Introduction

The desire to impart knowledge and wisdom has existed since the time of early civilized man. Yet, the methods of sharing information have changed dramatically. With today's rapidly changing technology, computer hardware and software innovations can now enhance the learning process in ways never dreamed of by our ancestors. It is our view that commitment to teaching excellence is enhanced when innovative and creative methods are introduced into the educational setting.

Our paper demonstrates how professional and presentation software can be used in the educational environment to improve the learning experience. This approach applied in both post graduate and continuing professional education classes reinforces concepts, stimulates interest, and reduces repetitive efforts by students.

Professional estate, gift, and fiduciary software packages developed by Shepard McGraw-Hill were introduced into a graduate tax course. This course is designed to help students develop the knowledge of a highly specialized area of the U. S. tax code and help develop skills that the students will use as they enter a professional career in public accounting. A secondary objective of the course is to enhance the students' abilities to succeed on the national CPA exam. When combined with text material, role playing, and research activities, the professional software did enhance the students' learning experiences. The software was useful, because it allowed the student to focus on the concepts rather than the repetitive mechanical process of preparing the tax returns. It also stimulated interest, because the students knew they may very well be using this software package, or one similar to it, when they enter professional practice.

The software was also used in a continuing professional education (CPE) setting where accountants and attorneys return to the classroom to update their skills on current topics and technology. The software was demonstrated in the classroom and then the practitioners moved to a lab environment where they actually used the software in the solving of tax problems. Response from the professionals was very positive. They were pleased with the ease of use and the skills they gained during the conference.

New presentation graphics currently being used by professors and students in the classroom can also greatly improve the learning experience. First, it helps the presenter better organize and plan the presentation. Secondly, because it is visual, it may help the audience retain the information for a longer period of time. Presentation software, such as Freelance Graphics, can be used in combination with current hardware, such as the Notebook Computer, high intensity overhead projectors, and colored LCD panels to make effective presentations at professional meetings such as the National Conference on Successful College Teaching. When the presentation is clear, orderly, and interesting, the over-all learning experience for the students can be greatly improved.

The Software

When we chose to use the Shepard's/McGraw-Hill Software, there were several contributing factors to our decision.

The major contributing factor was the similarities between the different pieces of software. This underlying similarity is in the user interface.

In the business community, the major computers being used are Intel based MS-DOS (IBM compatible) machines. Unlike the Macintosh, or more recently Windows, the user interface for each DOS program tends to be designed solely for that particular program. This entails the student learning the unique commands for each program. As an example, saving a file in WordPerfect requires pressing the F10 key, while the identical command in Lotus 1-2-3 is accomplished by pressing the following keys in sequence: /, F, and S.

By adopting three programs from the same vendor, the students were confronted by only one user interface. The lessons learned using one program were immediately applicable to the next program.

All three programs present the student with identical Originate menus. The student can, from this menu, choose to either start a new tax return or edit an existing tax return. The other options are usually not applicable to a classroom environment, and were not discussed with the students.

When creating new tax returns, and when editing existing tax returns, the student is shielded from the Disk Operating System. It is not necessary for the student to understand the intricacies of file name constraints, extensions, subdirectories, paths, etc. Rather, the student either just enters the name and year of the tax return if creating a new return, or chooses the correct return from a list. It is easier for the student to look for William W. Ryan 1992 on the list of existing gift tax returns, than to remember that the correct files are located in the following directory: C:\FGT\FGTFILES\FGT1.FGT. In fact, the only knowledge of DOS required to run these programs is to type fgt, fit, or fet at the C:> prompt. If the programs are installed on a computer running Windows, it is very easy for the computer support staff to create icons to run the programs from within Windows.

Another feature adding to their ease of use of the programs is the adoption of some features of modern Graphical User Interfaces (GUI). Research done by Xerox at their Palo Alto Research Center resulted in a new paradigm of computer user interfaces. This research was used in the design of modern GUIs, such as the Macintosh, Windows, OpenLook (unix), SunView (sparc), NeXT, and other interfaces too numerous to mention.

Many of the options given to the student require an additional small series of choices. One example is found within the Originate menu choice "System configuration" of the Shepard's software. After selecting System configuration, a small box appears in front of the Originate menu in which the student selects which part of the system configuration will be modified: the Data disk drive selection, the Printer configuration, or the Screen configuration. If the Screen configuration is chosen, another box appears on top of the previous screen upon which the student can select from two additional choices: Select display colors or Select graphics mode. For an additional example, one can examine the choices given when adding items onto a subsidiary schedule. First one chooses to work with a subsidiary schedule, and a small box appears in front of the menu requesting additional input. This method of choosing options is becoming the defacto standard among all GUIs, and most students will be familiar with it from other programs with which they work.

However, the majority of the options the student will face will be from an extensive menu. The Federal Estate Tax program's Main menu includes 24 different choices, ranging from Decedent Information (which the student will need to work with) to preparation of State Returns (which the student will not need to work with).

The use of a menu system has two advantages. First, by listing all of the options available, the student can use the menu as a check list: "What should I do next?" In addition, there are no hidden commands for the student to memorize. One example of hidden commands can be found in WordPerfect. If you wish to add a non-standard character to a document such as "¶", you must press the Ctrl key, followed by a V. This action will bring a menu from which you can choose the character you wish to insert into the document, assuming that the student has memorized this entire process. By utilizing on-screen menus, the student can use the program, rather than memorizing cryptic codes.

A tax form is a collection of different items, dollar amounts, etc. If the student is presented with a random series of facts and wishes to place them on the tax form, a clerical job is created. The student must organize each item onto the page of the form on which it is to appear. If an item appears on two separate places, additional difficulties are created. Later, when new items appear, they may affect the placement and calculation of the old items. By utilizing a computer which will reorganize the items and recalculate totals when there are changes, the student is shielded from the clerical level of the work and can spend the time researching the tax issues and exercising judgement.

The student can also, at any time, examine the tax form which will be generated by the program. This possibility allows the student to examine the effects of incremental changes made. By examining these changes, the student can see first hand the structure of the laws.

The program also will produce high quality output. The student whose handwriting suffers will not be at a disadvantage compared to the student whose handwriting is impeccable. The instructor will be able to easily see which student understands the material, and which student does not.

Lessons Learned

We have utilized this software in two different classes to date. In so doing, we have discovered a few lessons on the use of commercial software within a classroom setting.

The best situation for use of the software is if the student has access to a home computer, installs the necessary software on the home computer, and has all of the software manuals. This situation has not been an option for our classes. Stetson University does not require its students to own a personal computer. Even if Stetson required a personal computer be owned by the students, there is no guarantee that every student would choose an MS-DOS model. In addition to the computer access situation, much commercial software is priced too high for the average student. It may be possible to get an educational price for the institution's purchase of the software, while the software publisher may hesitate to sell copies of its software to students.

The second best plan would be to install the program in the university's computer labs, and distribute copies of the manuals to the students. While the installation of the software in the university's computer labs was feasible, the distribution of the manuals was not. The Federal Estate Tax Returns manual alone constituted 442 pages.

The plan of action which we used was the following: First, we installed the programs in the university's computer labs. We also installed a copy in the departmental secretary's computer so that the students would be able to make laser printed outputs. We created a 10 page handout for the students which walked the student through a typical assignment. Finally, a copy of the manual was placed on reserve in the student computer laboratory. In this fashion, the student became familiar with the structure of the program with their own copy of the class handout, and still had access to the full set of manuals.

The class handout should be complete enough for the student to work through the entire problem. If possible, screen images should be included in the handout. If you are not sure if some small detail should be included, it probably should. Do not assume that the student has any prior knowledge.

The software was primarily used during the course of a final project. The students were given partial information on a descendent's estate, and were given instructions to complete an estate tax return. The students were able to input the information they were aware of and used the software to discover at least some of the missing information required. The students were given the opportunity to interview the family, lawyer, and other individuals with pieces of the missing information. Each piece of information was then added to the student's data file. The results of this simulation of a real world tax problem would be a completed tax return. Throughout the entire process, the software proved invaluable during the remainder of the course.

In the future, we also plan to spend at least one day in class demonstrating the program. While this will take away from the time spent on the subject matter, the resulting familiarity with the software should prove beneficial during the remainder of the course.

Presentation Software

Another area in which we are experimenting is in the use of presentation software for class lectures. The use of presentation graphics software such as Freelance Graphics for Windows has the following advantages: ease of preparation of visual aids and well-structured lectures.

Images, charts, lists, text, etc., can be placed upon a transparency with great ease. When working with this software, you are instructed to "Click here to insert title," "Click here to insert a graph." There is almost no need to refer to the manual to create standard slides.

In addition, the order of the slides can be easily changed. The preparation of the individual slides and the ordering of them are two separate tasks, and each can be changed as the class requirements change.

Once slides are prepared using presentation software, the next step is to skip the preparation of hard copy. It is now feasible for the instructor to prepare the slides on the computer, and then use the same computer to generate the image directly to a liquid crystal display (LCD) unit on an overhead projector. By displaying the slides in this fashion, one no longer must deal with physical transparencies. One can change the slice (either forward or backward) by pressing a button on the mouse. By utilizing the mouse, the instructor is no longer required to stand by the overhead when changing slides. In addition, the waste involved in creating transparencies is lessened.

The cutting edge of presentation of software includes the use of color LCD panels in conjunction with multimedia. Color LCD panels are still expensive, but as more people purchase them, the price will drop to the point where there is little financial incentive to use the black and white LCD panels. The latest generation of presentation software includes multimedia capabilities. It is possible to include sounds and video clips into a single slide.

Cross Disciplinary Uses

The use of commercial software is not limited to the business arena. Currently, it is difficult to imagine writing a term paper without a word processor. Most word processors include spell checking programs as well as outliners, a thesaurus, and a grammar checker. An on-line dictionary (with definitions), as well as libraries of quotes, are also available to help students with their papers.

Other programs which are currently being used by students include spreadsheets and presentation graphics programs. However, these programs tend to be used only by business students, even though their capabilities can be easily used by the sciences as well.

This presentation only skims the surface of available commercial software. In mathematics there are several programs which are beginning to be used for educational uses: Maple, Mathematica, MatLab for symbolic manipulation as well as SPSS and Minitab for statistical analysis. The future will also include the use of CD-ROM databases, CAD-CAM programs such as Autodesk, and other commercial software. Lastly, the use of the Internet for educational purposes can only increase.

By embracing commercial software, instructors can find programs which will ease some of their workload, create a better learning environment, and prepare their students for entry into the real world.

In summary, we feel that exposing the students to professional software, as well as integrating the use of the software into the student's coursework, will reap large dividends. The students will be able to use the tools provided to increase their comprehension of difficult material. This paper has only scratched to surface of an area which can be profitably mined for years to come.

PARTNERSHIPS IMPROVE TEACHING AND LEARNING

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Abstract

There are many practical, creative teaching alternatives. However, unless there is a process to assess the effectiveness of these alternatives, there is no way to know whether they are an improvement over traditional lecture. A critical analysis of instruction with a peer in a non-threatening environment can lead to improvement in teacher effectiveness and student learning. This presentation will focus on a peer project at Northern Michigan University designed to help faculty improve teacher effectiveness and student learning.

Introduction

The quality of instruction at the university or college level varies greatly. The evaluation process in most institutions of higher education does not reward quality teaching. More emphasis is placed on research and service. Because quality teaching is not rewarded, very little research is being done in this area. As a result the literature offers few models for University professors to improve or to help one another. A critical analysis of instruction with a peer in a non-threatening environment can lead to such a model and create a partnership for improving teaching and learning.

A difference in the process for improvement of instruction at the university level has to be explored. Work with K-12 districts has convincingly indicated that peer coaching, rather than direct supervision, is that process. Supervision at the K-12 level has historically been top-down. School administrators, superintendents, and principals were charged with this task. According to Oliva (1989) their function has been to give directions, check on compliance with prescribed teaching techniques, and evaluate results of instruction by teachers in their charge. K-12 supervision has been a way of maintaining power over classroom teachers and control of the classroom environment. Lucio and McNeil (1979) concluded that teachers in these cases were viewed merely as instruments that should be closely supervised to insure that they carry out the methods determined by the administrators. Very few university programs have trained administrators to do anything different. Programs that did address instruction continued to focus on evaluation of teaching rather than supervision for improvement of instruction. It was not until the late 1960s and early 1970s that the concept of clinical supervision challenged this process. Cogan(1973), an early advocate, held that clinical supervision was neither counseling nor therapy, it functioned as a professional collegiality between supervisor and teacher. A trend toward administrator and teacher working together for improvement of instruction began with the introduction of clinical supervision. Even with this model, however, the concept of administrator as the expert and the teacher as the subordinate continued.

Instructional leadership has become a universally accepted role for educational administrators and is more inclusive in its concept than supervision. While the term means different things to different people, Sergiovanni (1992b) says that direct leadership still receives too much emphasis. Again the administrator remains the expert and the teacher the subordinate. He suggests that we find substitutes for direct leadership so teachers can become self-managing. One way to develop self-management is through building collegial relationships between two or more teachers, which create partnerships. The university setting is most conducive to forming such partnerships.

The K- 12 model for supervision or evaluation does not operate at the university. Academic freedom allows college professors to teach what and how they want without unwarranted interference from superordinates. The university concept assumes a professionalism exists which guarantees quality instruction; to a large extent this assumption proves accurate. However, it is also true that existing autonomy and isolation make it unlikely that collegial professional relationships for improving teaching will develop naturally. One of the purposes of this paper is to describe a Peer Coaching model developed by the authors at Northern Michigan University in Marquette, Michigan. The model allows professional educators to develop collegial professional partnerships to help them improve their teaching in a threat free environment in cooperation with their Department Chairs, but apart from direct supervision or evaluation from that office.

Department Chairs who encourage faculty to enter collegial improvement relationships not only will find better working relationships among faculty, but will also enhance their position of respect with the department and university. The improvement process may be hindered by Department Chairs who use their position power to evaluate. They earn real power through giving it away, by freeing faculty to enter collegial relationships to achieve improvement as a result of their cooperative efforts. Hagberg (1984) describes how successful leaders move from lower stages of power (position power) to higher stages (empowerment).

The term collegiality goes beyond congeniality. (congeniality suggests a more superficial relationship that may exist in a school, but may not be related to teaching and learning. Susan Moore Johnson (1990) describes collegiality as teachers who are:

> working together, debating about goals and purposes, coordinating lessons, observing and critiquing each other's work, sharing successes and offering solace, with the triumphs of their collective efforts far exceeding the summed accomplishments of their solitary struggle. (p.148)

According to Sergiovanni (1992a), collegiality must be valued as a professional virtue. He states that real collegiality:

> is connected to the existence of a set of norms and values that defines the faculty as a community of like-minded people who are bonded together in a common commitment. Because of shared work goals and a common work identity, they feel obligated to work together for the common good... As professionals, teachers are not only concerned with their teaching practice but with the practice of teaching itself-and their concern requires them to act collegially (p. 213).

Hargreaves and Dawe (1990) report that supervision is incompatible with healthy collegial relations because it consists of "hierarchical relations embedded in bureaucratically-driven systems" (p. 25). In their view, clinical supervision is a form of contrived collegiality and rarely fosters the conditions associated with interdependent collegiality.

Collegiality cannot be forced upon people. It must be intrinsically motivated by a mutual desire by two or more colleagues who wish to help one another improve. Evidence is mounting in the research that teachers generally learn more readily from interactions with other teachers than they do from interactions with supervisors (Grimmett, Rostad & Ford, 1992).

A natural outcome of collegiality among university faculty members is trust building. The unspoken, yet very evident presence of competition between professors within and between departments is reduced, and cooperative efforts to meet organizational goals is enhanced. Department Chairs can provide leadership through empowering faculty to become self-managed and self-directed in their efforts to improve their teaching. Most evaluation processes in departments are strictly that, evaluations to meet contractual obligations with very little concern for improvement. Partnerships, on the other hand, improve teaching and relationships.

In his book, *On Becoming a Leader*, Warren Bennis (1989) describes ten factors for creating learning organizations. One of them he calls, "Leaders understand the Pygmalion effect in management" (p. 197). Just as Professor Henry Higgins will never accept Eliza Doolittle as anything other than his remake of a Cockney flower girl, educational administrators who maintain control of teachers' evaluations as a means for their improvement will be unable to establish trust among staffing their ability to be self-managing or assume a role in their own professional development. They will instead need to develop the attitude described in Bennis' first factor, "Leaders manage the dream" (p. 192). If one can recruit good people, communicate the vision, let them carry the ball and then reward them for excellence, that person is managing the dream effectively and is developing trust and good will while improving teaching.

Professional educators who are managing their own dream have broken out of the mold. They are changing the accepted context in which they are expected to work. They are no longer "prisoners of the habits, practices and rules" (Bennis, p. 36) which create the culture of their workplace. Again, as Bennis asserts, they Conquer the context" (p. 37). They change the ways things are done. They "refuse to be deployed by others and choose to deploy themselves (p. 37). Educational administrators who promote such behavior on the part of their professional staff become managers of the dream, and their staff becomes colleagues who are free to dream and do and become better and better at what they do. Our model has helped us become self-managers of our professional development.

Quality instruction requires an analysis of how appropriate knowledge bases, pedagogy, content, and pedagogical content are tied to effective professional practice. Lee Shulman refers to this as "wisdom of practice" (Brandt, 1992). Research on effective professional practice appears in every educational journal. Now it is time to encourage instructors to use this research creatively, experiment with it, and take risks in a threat free environment. In an interview with Ron Brandt (1992), Lee Shulman says that he becomes:

> especially concerned when districts not only teach the principles of effective teaching in their staff development programs but also translate them into the instruments through which they evaluate teachers, as if to imply that if teachers are enacting these general principles they are effective and even excellent teachers, and that we need not ask any more questions about their teaching (p. 16).

We are proposing a model which will encourage instructors to experiment, take risks, be creative, break out of their context, and develop collegial relationships, while strengthening their instructional programs. We found the implementation of the model to be among our most professionally rewarding experiences.

The Project

After reviewing the research literature on supervision, evaluation and peer coaching, we developed a program that meets the needs of the University for continued improvement in teaching and learning. At the same time our program meets the needs of the Education Department to ensure that the instruction offered reflects the knowledge bases and best practice in professional education. The program also offers a vehicle to show to public school educators how a critical thinking process can increase knowledge and improve teaching and learning.

During the Winter 1991 semester we used a peer coaching model. ED 541B, Supervision of Instruction, taught by Lois Hirst, and ED 544, School Law, taught by David Blomquist were scheduled for alternate Tuesday evenings on campus in order to implement this model in classes at the University. We chose to use Glickman's clinical supervision process to begin the program. Glickman (1990) proposes several methods for supervision: directive, collaborative and nondirective.

The model consisted of a pre-conference prior to delivery of a class session, where objectives and teaching strategies were discussed. The observing teacher sat in on the class session, taking notes as the session progressed. Script-taping, anecdotal record and selective verbatim were the methods of recording. In addition a video-tape of each class session was made. The videotape was done for research purposes rather than for peer coaching. While it can be very instructive if used appropriately, we do not recommend video-taping unless both instructors believe there is a special need. We believe that video-taping is much more intrusive than a peer observer. It can be restrictive, threatening, stifle creativity, and spontaneity and bring in an element of evaluation. A post conference between the two instructors then followed where the effectiveness of the strategies in meeting the objectives was discussed. Neither of us viewed the video-tape prior to that conference. The conference was held as soon as possible after the observation. Again, both the pre-conference and post-conference were also videotaped for research purposes. The roles of the observing teacher and the instructor were alternated by the two NMU instructors.

While the model worked very well for us, we found the directive concept of Glickman's model very uncomfortable. Our uneasiness, we believe, was directly related to our experience. Superordinates employ directive evaluation methods. Peer coaches or professional colleagues should not. They should instead use the collaborative and non-directive approaches. In fact, we found them to be the same thing. An example would be the time, after an evening of much teacher-led lecture and question-and-answer by one of the authors, he sought the ear of his colleague. She listened as he described his concerns about the effectiveness of the class and his ideas for a better procedure. She then offered positive reinforcement for his ideas and made several additional observations. Both collaborative and nondirective approaches were operating and both colleagues benefitted by the process. A directive approach would have been unnatural and stress producing, thus rendering the experience less beneficial to both. Any behaviors which produce the "evaluative, I have the clipboard" aura detracts from the collegial relationship of two equal partners trying to help one another improve.

We now believe that there is another level beyond the formal conference stage outlined in the project. This stage emerged during the 1991-92 academic year and was not a planned activity. It grew out of the genuine collegial relationship which had emerged during the formal project. We believe this stage correlates with Sergiovanni's (1992a) professional and moral sources of authority. He describes what is expected when we base supervision on professional authority as "teachers are expected to respond to common socialization, accepted tenets of practice, and internalized expertness." Supervision under moral authority is described by "teachers are expected to respond to shared commitments and interdependence" (pp. 204-206).

In the winter of 1992 one of the authors, Lois Hirst, was exploring alternative ways of presenting concepts for ED 542, School Personnel Administration. In reviewing the literature she found several articles (Kagan & Tippins, 1991; Shulman, 1991) which described programs where students wrote case studies and used them as a basis for discussion in classes. The idea had great appeal. She spoke with her colleague, David Blomquist, who encouraged her, asked questions which forced her to think about her reasons for wanting to include case study writing, whether or not there was a research base for what she wanted to do, and whether it was appropriate for the content of this specific course. We concluded that it was important to try case study writing.

Students were given guidelines, and a discussion concerning the components of good narrative writing took place. Students presented first drafts which were critiqued by the instructor and 3 or 4 other students in their small groups. Everything from grammatical structure to content and purposes was discussed. Students rewrote and presented a second draft to the instructor, their groups, a practicing teacher, and a practicing administrator before presenting a final case study.

During this process, we informally discussed the progress of the case study writing--sometimes literally in the hallway of the faculty office building. At the end of the semester students heartily endorsed the use of case study writing as adding to their understanding of school personnel administration, because it gave them an opportunity to react, reflect upon, and solve "real" situations. We discussed the students' reactions and shared some case studies. A few changes in procedure were made as a result of these discussions, and case study writing has become a part of the course.

At about the midpoint of a Spring 1992 course in school finance, David Blomquist found himself to be unhappy with the way class had gone on the evening referred to earlier. Three and a half hours of lecture and discussion on taxation and equity in school finance had caused a strain on students and professor. As his colleague listened and reinforced many of his ideas they explored some options which would create a more productive climate while meeting the class objectives. She suggested small group analysis of portions of the lesson with feedback from one group to the others. He offered another idea, introducing a competitive spirit by having the class vote on which groups had the best solution. Thus, they both agreed on a third activity. Each group was to read a section of the text, discuss it, rewrite it in their own words, and present their work to the whole class. All three ideas were applied in succeeding class sessions. The students participated excitedly, the objectives of the lesson were met and our partnership had brought us to Sergiovanni's professional and moral levels of authority.

Conclusion

There were no formal observations. Fine tuning of teaching techniques or small components of the effective teaching research were not necessary. We acknowledge each other as effective instructors. Both of us are still concerned with our own teaching practice but have become aware of the practice of teaching itself. By thinking through the process, we believe that we serve as role models for teachers and administrators in our classes. We are willing to take risks, acknowledge when we have failed, learn from these failings, and become better instructors for having taken risks. Bennis (1989) states, "It's self evident that if we can't take the risk of saying or doing something wrong, our creativity goes right out the window." (p. 95)

School administrators and university department heads can encourage teachers to move in this direction. They must be forewarned, however, that teachers will not reach this new stage of professionalism overnight. It emerges through experience and the development of a collegial process.

New teachers are concerned with self and survival. This preoccupation will continue as long as the tenure process remains. The conference process is very important to their development. Instructors may need directive conferencing if they lack knowledge bases or are unsure of themselves. As they become more self-assured, they can move to collaborative and non-directive methods. Once they have become reflective and are comfortable with their teaching decisions, they may move to a stage of professionalism that they have not known in the past. Unless there is a specific problem they cannot solve, classroom observation and conferencing is not necessary. If they have a real collegial relationship, they can feel comfortable taking risks, making mistakes, learning from those mistakes, and achieving professional status. As Sergiovanni(1992a) says in the opening statements of his article, he looks forward to the day when there will be "supervision with no supervision, evaluation or inservice as we know these practices today" (p. 203).

We see this as an achievable goal. We have concluded that this process is effective and should be ongoing. Its strengths are that it establishes a trust relationship between professional colleagues which increases knowledge, improves practice, and results in an opportunity to improve without fear of jeopardizing one's professional standing. School administrators, supervisors, and department heads need to let go of position power, create a climate for collegiality-not just congeniality-and embrace the higher stage of leadership: empowerment. When they are able to do this, the teaching profession will become just that a profession.

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CREATIVE TEACHING AND THE PRACTICAL APPLICATIONS OF KNOWLEDGE

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Teaching, like music, is an art. It requires the same level of commitment, talent, dedication, and receptivity to new modes of thinking and creating.

In order to assess where we are, it is necessary to look objectively at where we have come from and where we aim to go in the future. Alas, many of our confreres have become robotic. They spout the party line as it was handed down to them, give little thought to their students as individuals, center their attention on their own personal research or creative activity, and, in essence, use their position as a scaffold on which to climb the ladder of personal and professional success. As a consequence of this modus operandi, students are often turned off, attention wanes, legislators and the public form negative impressions of college teachers, and the current straw man, teaching versus research, emerges as a political football.

The remarks which follow are based upon my personal observations and experiences over the past twenty-three years as a professor of music at the University of Florida. During this time frame, I have taught graduate and undergraduate courses in music history and literature, music criticism, and historical musicology. I have also directed master's theses and doctoral dissertations. Other duties have included service as coordinator of musicological studies and of graduate studies, and work as either chair or member of numerous departmental, college, and university-wide committees.

It seems to me to be imperative that the teacher, if he is to keep abreast of developments and changes in his field of expertise, assumes the role of life-long student. No matter the degree of fame or honor (I hesitate to use the word fortune) he has achieved, the panacea is never reached, but it is that longing for the unattainable which creates new pathways and fresh approaches to old problems. All too often, academics cease to grow intellectually once they obtain the terminal degree. The term terminal sometimes becomes synonymous with the term fatal. The illness in this case is mental lethargy. Learning must be a continuum, a process which enlivens and enlightens the professor. The student tends to respond favorably when he observes his instructor in the role of student rather than in the visage of grand pontificator, fount of all knowledge, omniscient purveyor of truth and beauty.

It is a sine qua non that the teacher will read regularly the journals in his field, participate in scholarly forums, serve in a leadership capacity in professional associations, publish in timely fashion, act as spokesperson for his academic area, and represent the concerns of his students in the appropriate councils of his institution. In each of these activities, the teacher is a learner; in these realms he learns as much from his experiences as he does from his books.

Student involvement in the classroom is a subject about which there is much divergence of opinion. In small specialized classes, particularly at the graduate level, I encourage active participation by class members; a variety of formats are possible, ranging from panels with a chair in charge of providing decorum and direction, to the professor asking specific questions of specific students. As many of our charges will one day teach, class lectures by students and student-organized panels and discussion groups have proven to be successful methods of instruction. Critiques of assigned research articles and, with music in particular, of live and recorded performances, provide yet another approach which has elicited positive feedback. The introduction of illustrative material, technological demonstration, and other enhancements to the learning process are heartily encouraged. At the University of Florida, all doctoral students in music are required to enroll in the course Supervised Teaching. If they are graduate teaching assistants (GTAs), their Supervisory Committee Chair will observe them throughout the semester and provide written and verbal commentary. Those who are not GTAs are assigned instructional duties in one or more classes in their area of emphasis, and evaluated similarly.

With large undergraduate classes, such as our Introduction to Music Literature course, it is helpful to learn the names of as many students as possible, using a seating chart if need be. This procedure enables the instructor to check more closely on the student's involvement in reading the text or other supplemental sources, and it ensures that no one is immune from being called upon in class. In music literature classes, those students with skills as performers are invited to play or sing representative works in class, thus providing them with an opportunity to overcome the nervousness which can impede the success of a public performance; indeed, the non-threatening environment also allows the audience (the class and the instructor) to become more directly involved in the process of making music. The informal setting brings together the creator (the composer), the recreator (the performer), and the auditor (the listening audience) in a way which often eludes the concert hall venue. It goes without saying that the professor ought to perform regularly as well.

The subject of student research is one dear to my heart. I believe that students in graduate degree programs, and, in some instances, in undergraduate programs, should engage in original and creative research, the projects carefully and regularly monitored by the major professor. One practical value of this activity is that the researcher will acquaint himself with primary and secondary source material, with research methodology, and with the development of writing skills germane to his discipline and to the targeted audience. When theses and dissertations are degree requirements, it is a given that such research will occur with, of course, varying degrees of excellence. What is suggested here is that students be encouraged to prepare abstracts and papers for consideration by professional organizations with a view toward delivering them at conferences in their area of study. At the University of Florida, music history students have a long history of presenting papers at scholarly gatherings and of publishing in appropriate journals. These activities bolster confidence, provide much-needed experience, and enable the acolytes to get their feet wet, so to speak, in the real world of academia (an oxymoron perhaps). Apart from the lessons learned in eleven the classrooms, our disciples, for good or ill, are put on notice that the groves of academe are filled with thorns and thickets. There is little that is more exciting. at least to this well scratched academic, than to observe the light in a student's eyes grow from a dim flicker to an incandescent glow when a major breakthrough is uncovered in a research effort.

The teacher must be a role model for those whose minds he is called upon to shape. He needs to show equanimity to all despite the oft-time wide disparity of gifts and abilities of those who populate his classes. He has to strive for the patience of Job and the humility of Mother Theresa, virtues which do not come easily to many professors. The instructor who can perform should do so to clarify and to illustrate characteristics of the music under examination. He might also invite colleagues or visiting artists to Perform or-lecture in his classes. One live recital can create the kind of excitement and enthusiasm that no amount of verbiage can convey. In art, seeing is often believing; in music, seeing and hearing go a long way toward making believers of our captive audience. The cognitive and the affective domains, when working in tandem, produce the most salubrious results.

For purposes of illustration, "Golliwogg's Cake-walk" from Claude Debussy's piano suite, Children's Corner, will serve to point out the variety of elements that reach beyond the literal notes on the page. The music was composed for Debussy's daughter, known as "chouchou," who, at the time, had an English governess who read to her stories by Bertha Upton. One of the characters in these tales was a grotesque black doll called "golliwogg." The cake-walk in the title refers to an American Negro entertainment in which a cake is the prize for the most inventive steps and figures in walking. With a characteristically jaunty rhythm, the dance conveys a jazzy atmosphere quite remarkable in art music of that era, circa 1908. But that is not all that has to be considered when studying the piece of subtle satire. In the midst of the golliwogg's dance, Debussy inserts the direction "avec une grande emotion"; at which point he takes a jibe at the hyperromanticism of Richard Wagner by paraphrasing the German's Prelude to Tristan und Isolde and following it with a "shame on you'll musical commentary. (Performance of "Golliwogg's Cake-walk.")

It is also essential for the professor to show his students art work which inspired musical creation. For example, a discussion of the nineteenth-century tone poem, such as Liszt's Hunnenschlacht, is not complete without the student being exposed to Wilhelm von Kaulbach's painting on this subject, i.e. The Battle of the Huns. In the same vein, treatment of Mussorgsky's piano suite, Pictures at an Exhibition, would not be totally satisfactory without showing examples of the sketches and drawings by Victor Hartmann which inspired the composer. In short, one must not become overly literal lest the nuances, which tend to characterize great art, become sacrificial lambs to expediency.

Expectations and reality, from both the professor's and the student's vantage point, are frequently a source of division and misconception. The student's expectations vary widely depending on whether the course is required or not required, whether he does or does not know the professor's reputation as a teacher, scholar, or creative artist, whether the course is in his major, minor, or neither, whether he is taking the course for credit, as an auditor, on a pass-fail basis, etcetera. Regardless of the student's frame of reference, it is incumbent upon the professor to instill a sense of commitment to the subject matter by whatever means he deems likely to achieve results, or, at least to generate interest.

Too often, reputations precede professors and impact adversely. On many campuses there are student publications which offer comments about certain courses and professors, usually referring to the laxity or severity of the grading policy or the amount of homework required. Students may be rudely awakened to reality when they discover that either their information is inaccurate or that the professor has changed his style, image, and course expectations. The professor, too, may live for awhile in an ivory tower in which, in his idealistic mind, all students will possess extraordinary intelligence and talent and will respond in the most positive ways to his ministrations. Even the "head in the clouds" maestro eventually recognizes reality when it comes crashing down on him.

In the current brouhaha over teaching versus research, I hold the view that the two are not necessarily inimical. From my own subjective perch, research is a boon to invigorating and challenging teaching. It provides a window through which to explore the unknown, and it moves us beyond the humdrum and the routine. The discovery of new knowledge or the modification of old theories is what the academic life is, or should be, about. Our students learn from our example. Too many times we have been stigmatized by the old shibboleth, "Those who can, do; those who can't, teach." I now propose a new axiom for our profession: "Those who can teach, DO."

WRITING (AND TALKING) TO LEARN:

INTEGRATING DISCIPLINARY CONTENT AND SKILLS DEVELOPMENT

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Abstract

Writing and discussion are excellent ways to master content and develop analytical abilities. They also help students become active and collaborative learners. Faculty sometimes resist adopting the techniques, fearing loss of disciplinary content or of opportunities to practice formal writing. The paper describes several cases which successfully integrated coverage of disciplinary content and development of writing and analytical skills.

Introduction

Writing to learn: this concept, which may be familiar to many but seem novel to others, is well supported--by both intuition and an extensive body of literature. This literature reports theory, research, and substantial experience with what is commonly known as Writing Across the Curriculum. Both writing and learning are typically leading priorities of both institutions and individual faculty members. Despite this, many faculty seem reluctant to adopt the practice of using writing to foster learning. In some cases, they have not been introduced to the concept, or are skeptical about the idea or its proponents. In other cases, their reluctance stems from institutional barriers--the tradition of placing responsibility for writing in the English department or a reward structure which provides little incentive to spend the time required. Many times, however, they have personal apprehensions about their preparation for teaching writing, or they are reluctant to sacrifice the time otherwise used to cover what they regard as indispensable disciplinary content. The difficult process of overcoming these institutional barriers is not the focus of this paper; though I believe that it is crucial to the ultimate success of efforts to encourage writing in all disciplines. Many of the individual barriers, however, are likely to yield to better understanding of several things: what it is to write and learn, that these can and should take place within the disciplines, and that faculty members in the disciplines are eminently capable of guiding students in these processes. My own journey to these realizations has been haphazard, often informed by neither theory nor the experience of others. Moved to begin the journey by frustration with classes which didn't seem to be accomplishing my objectives (or those announced by my university), I frequently discovered relevant theory or experience only after stumbling, sometimes awkwardly, onto my own ways of doing things. The purpose of this paper is to share with colleagues, some of whom may be only beginning their own journeys, my experiences with helping students to learn by writing. I hope that those experiences will prompt others to begin what I have found to be an exciting and satisfying excursion.

Writing Across the Curriculum

The intuitive support for the idea that writing is a way of learning should be familiar. When we want to imprint something in our memory, we instinctively reach for a writing instrument. When we want to understand our ideas, see their relationships, and manipulate them, we put them into writing. It is something which simply comes naturally. These intuitions, however, do not often seem to inform our pedagogy, perhaps because they are so instinctive.

The theory supporting the proposition is well developed. It is central to what has come to be known as the Writing Across the Curriculum movement. We owe its early articulation in the United States to Janet Emig, who in 1977 advanced the idea that "writing represents a unique mode of learning--not merely valuable, not merely special, but unique" (p. 122). According to Fulwiler, Emig helped us to see that "the act of writing allows us to manipulate thought in unique ways, because writing makes our thoughts visible and concrete and allows us to interact and modify them. . . . developed thinking is not really possible, for most of us, in any other way" (Fulwiler, 1982, p. 18). Both the movement and Emig herself owe much to the work of Britton and his colleagues in their studies involving British school children. In addition to the phrase "writing across the curriculum" itself, this work contributed an important way of classifying writing--according to its function. Transactional writing is that which seeks to inform, persuade, or instruct an audience. Such writing, they found, made up the majority of work performed by British children. This is the most familiar kind of writing in academia, found in term papers, examinations, lab reports, and so on. Poetic writing (what might be called creative writing in this country) is artistic language common to fiction, drama, and poetry. The third category, expressive writing, is that in which writers speak to themselves or others close to them. It is the writing which is closest to thinking (and hence, contributes most to learning). Significantly, it made up only about five percent of the writing which Britton and his team examined (Fulwiler, 1982, p. 20). It is by far the least common kind of writing found in American higher education. Britton also was one of the first to conceptualize writing in terms of a process rather than as a finished product. This is another centerpiece of the theory.

Out of all of this theory emerged the Writing Across the Curriculum movement in the United States. Our purpose here is to identify the development of some of the basic ideas of the movement, and not to provide a detailed history. But for those interested, Russell has provided an excellent history (1992), and Griffin has prepared an extensive annotated bibliography (1990).

This movement, which has writing to learn as its central tenet is said to represent a paradigm shift in the way in which the teaching of writing is conceptualized (Hairston, 1983). In contrast, the paradigm preceding the shift has sometimes been referred to as "learning to write." Drawing upon Hairston, Allen his colleagues effectively summarize its assumptions:

> 1. Students can successfully learn content whether or not they can write well.
> 2. Writing and thinking involve different skills. Each can, and perhaps should, be taught separately.
> 3. Knowing something is logically prior to writing about it.
> 4. Writing is a sequential, linear activity which involves the cumulative mastery of components like sentence structure or outlining.
> 5. Communication is the main purpose of writing. Written work is a product in which the student reports what he or she already knows.
> 6. The student's audience is most often assumed to be the instructor. (Allen, Bowers, & Diekelman, 1989, p. 7)

As the authors point out, it is implicit in these assumptions that writing is best taught by experts, most likely from the department of English, and that writers then transfer these skills to content areas.

The new paradigm, on the other hand, focuses upon writing to learn:

> 1. Writing is a process through which content is learned or understood (as opposed to memorized or reported).
> 2. Writing skills are primarily thinking skills (competence in one is inseparable from competence in the other).
> 3. Writing is a process of developing an understanding or coming to know something.
> 4. Writing is a dialectical, recursive process rather than linear or sequential.
> 5. Higher order conceptual skills can only evolve through a writing process in which the writer engages in an active, on-going dialogue with him or herself and others. Learning and discovering are purposes as important for writing as communication.
> 6. Different disciplines utilize different conceptual processes and thus have different standards for writing. Students can best learn writing within their own discipline while writing for real, concrete audiences. (Allen, Bowers, & Diekelmann, 1989, p. 7)

Thus reconceptualized, thinking does not, as in the previous paradigm, precede writing, with writing simply reporting the results of thinking. The two are mutually dependent. While writing skills are enhanced by clear thinking, writing itself helps to clarify thinking. Furthermore, these interactive processes ultimately help students develop into universal (or critical) thinkers--those who can understand perspectives other than their own (Allen, Bowers, & Diekelman, 1989, p. 7).

A common feature of this approach is to treat writing as a process, involving repeated drafts, in each one of which the student moves closer and closer to an understanding of the subject and a clearer statement of that understanding.

The process begins with planning and shaping the writing, typically accomplished through the use of tentative jottings, scribbled notes to ourselves--writing which has been labeled expressive. As the writer moves to drafting, writing becomes more and more formal. Invention and discovery continue, however, through the repeated revisions which are central to this process. In the final editing stages attention shifts to writing in its transactional sense. It should also be noted that the writer's audience changes as well: expressive writing is for oneself; transactional writing is for an external, and sometimes judgmental, audience.

Drawing upon this theoretical grounding, the movement has spread widely in the United States and has generated numerous reports of the experience of those in the movement. A recent survey revealed that 38 percent of the higher education institutions responding had Writing Across the Curriculum programs, and an additional seven percent reported that they hoped to establish programs soon (McLeod, 1989, p. 338). Of the institutions which had programs, over half were well established, that is, had been in existence for more than three years. A collection edited by two of the leaders of the movement contains reports on a number of "programs which work" (Fulwiler & Young, 1990). A recent search of my university library's ERIC electronic data-base using the phrase "writing across the curriculum" generated well over 800 individual items. All of this suggests a movement which has met with considerable acceptance.

The research supporting this enterprise and evaluating its results is somewhat less extensive than that urging its spread or reporting experiences with it. For example, one of the leaders, Elaine Maimon, has conceded that there is no major study which proves that writing improves the learning of subject matter, among other things because it is difficult to have a control group which does not write (Watkins, 1990, A13). Schumacher and Nash report that the research which has been done has resulted in somewhat confusing findings: writing has had a positive impact on some kinds of measures of learning but not on others. They suggest a possible explanation: different kinds of writing result in different kinds of learning. Thus, in calling for additional research, the authors urge the use of measures, not of the students' ability to recall or recognize information, but of understanding or conceptualization. After all, it is the latter and not the former kind of learning which writing theoretically should enhance (1991, p. 67). Despite the scarcity of empirical support, faculty continue to believe in the approach. Said one: "Students' writing would be worse if I didn't do it" (Watkins, 1990, A16).

In recent years, the phrase "writing to learn" has been used by some to identify the movement (Denner, 1993). Despite the fact that the term itself has been used for some years, this shift seems intended to focus attention on the underlying principle of the movement, not well captured by the phrase "writing across the curriculum."

Talking to Learn

Discussion groups have been used in higher education for many years, often as a supplement to lecture sections for large courses. Peer review groups have also been a customary technique for members of the writing across the curriculum movement. The value of peer groups is that they can provide the kind of immediate feedback and individual attention which is said to be crucial for students learning new skills and which, in large classes, is impossible for the teacher to provide. In addition, such student groups turn the isolation of most writing into a more productive social process (Huff & Kline, 1987, p.133).

Despite this theory, there is surprisingly little in the literature on the use of discussion groups as part of the learning process theory. The available literature, however, strongly suggests the strengths of groups in the learning process, particularly in developing critical thinking skills (Dixson, 1991, p. 11). The interaction which takes place among members of the group helps students to adopt different perspectives and roles--a key to developing critical thinking (Huff & Kline, 1987, p. 136). It is also argued that it is important for students not only to learn critical thinking skills but also how to use them in the kind of group settings which are typical of adulthood. Other benefits of group discussions include developing problem solving skills, helping students refine and test their ideas, and improving student motivation by increasing their investment in their learning (Huff & Kline, 1987, p. 136; Dixson, 1991, p. 12). A decisive argument has it that controversy is inevitable as different points of view arise among group members, and the resulting controversy leads to learning (Huff & Kline, 1987, pp. 136-7). It is not surprising that such cooperative learning processes are seen to produce more learning than individualistic processes (Huff & Kline, 1987, p. 138). In spite of the power of such collaborative learning groups, students working in peer groups are said to be the "single most under-used resources in most classrooms" (Huff & Kline, 1987, p. 133).

Resistance to Writing across the Curriculum

Despite its theoretical support and the extent of its practice, my own experience is that most of my colleagues are unaware of the movement. Those who are aware of it are often suspicious of its central tenet. Even those who agree that there may be some merit in the idea are, for a variety of reasons, reluctant to try it out. And among those who say they use writing in their classes, it most frequently consists of writing simply added on to the class--typically an end-of-term paper. These barriers to using writing to learn are not peculiar to my own institution. Young and Fulwiler (1990) have given us a catalog of them, and others have provided confirming evidence (Boice, 1990; Weinberg, 1993). Boice, for example, described the attitude among psychologists toward writing across the curriculum as "ready assent and rare application" (1990, p. 14). The sources of this reluctance are both institutional and individual. The institutional barriers are numerous and often difficult and will yield only to the concerted actions of individuals. Institutional reward structures in many institutions put a premium on research for publication and as a result mean that the time spent teaching and advising students is not well compensated. "Writing across the curriculum is founded on the premise that integrative writing tasks will improve undergraduate learning and communication abilities, and the faculty reward system explicitly devalues faculty efforts to realize that premise" (Young & Fulwiler, 1990, p. 291). And there should be no mistake: the strategies which I describe take a great deal of time and effort. Nonetheless, the skills developed by writing--the ability to think critically and analytically, the mastery of some body of information, the ability to synthesize and integrate that body of knowledge--all of these are typically at the top of any institutional list of objectives. Institutions which genuinely value these objectives can, one hopes, ultimately be persuaded to reward--with salary increases, and even with tenure and promotion--those who do the most to help students achieve them.

Institutional barriers may also include orthodox views among members of the department of English who may not be willing to see resources diverted from literary activities to support a campus-wide mission or who are satisfied that graduate assistants or part-time instructors can do an adequate job of teaching (Young & Fulwiler, 1990, p. 288). If the idea of writing across the curriculum is going to be adopted by more than those few isolated individuals who happen upon it in one way or the other, some sort institutional mechanism for propagating and supporting the idea will be needed. But such mechanisms do not fit comfortably in the compartmentalized administrative structure characteristic of most universities (Young & Fulwiler, 1990, p. 289). At a minimum, adoption of writing across the curriculum seems to require training faculty to approach the classroom in ways of which they are perfectly capable, but which may seem new and intimidating.

Overcoming Faculty Resistance

But many of the apprehensions which seem to prevent more faculty from adopting writing to learn techniques are individual rather than institutional, and can thus yield to individual action. Faculty members express concern that they are not expert enough to teach writing, that reading and grading the writing assignments will add extra work load, that students will dislike the extra work (particularly since it is writing), and that class time is already fully committed: writing assignments will take time away from disciplinary content which it is important to cover (Boice, 1990, p. 14).

One of the most common of these individual concerns is that those outside the English department are not trained to teach writing. In part this reflects a misunderstanding of what writing across the curriculum is all about. Knoblauch and Brannon concluded that most cross-disciplinary writing programs were little more than "grammar across the curriculum" (1983, p. 465). Thus, when faculty say that they aren't trained to teach or respond to writing, what they may mean is that they've forgotten precisely what a dangling participle is, or, what to do about one even if they recognize it. There is no doubt that mechanics are important and students often need help with them. They either have not been taught the mechanics, or they have been led to believe that they are not important, or they simply can't remember or don't care. For the most part, however, these problems are relatively easy for me as a teacher of political science to deal with. Sometimes it's only a matter of convincing students that mechanical faults are problems precisely because they obscure their meaning.

If the student's difficulties lie deeper than simple carelessness, providing an appropriate response still does not obligate me to become a grammar expert. In fact, most writing experts urge that our feedback on papers not concentrate on mechanical and grammatical corrections (MacAllister, 1982; Walvoord, 1986, ch. 6; Willingham, 1990). All of us can recognize--even if we can't name--the kinds of mechanical problems which are serious flaws in a student's writing. It is usually enough to alert students to their problems and direct them to the campus writing center for help. Feedback on papers can then focus on organization, content, coherence, and clarity of ideas. Not only do such comments contribute more to student learning, they may take less time than the detailed editing which faculty believe is expected of them. Thus, the demands of "grammar across the curriculum" are relatively easy for non-grammarians to cope with.

But there is a more fundamental reason why disciplinary specialists ought not to fear the movement. If writing is conceived as a process of learning, this focus places it squarely within the purview of those of us who are teachers and scholars. In fact, since teaching and scholarship are all about learning, we should be particularly capable of guiding students through the process; that is presumably what we do.

Faculty also complain that they are already hard pressed to include all of the content which they feel obligated to cover in the course and thus are reluctant to give up any of the course time to anything other than that most efficient method for transmitting content--the lecture. This is particularly a problem since a number of writing to learn activities require class time. This use of time is appropriate, of course, if writing and learning are going to be integrated into the course and not just tacked onto the end. Let us return to the classification of writing as either transactional, poetic, or expressive. Most teachers are likely to understand and assign transactional writing to their students. In this case, writing is used to convey back to the teacher information which students are expected to have acquired and, thus, be used to evaluate their performance. Remember, however, that Britton and his followers argue that it is in expressive writing that students are most likely to learn, and they call for "more situations in which writing serves as a tool for learning, rather than as a means to display acquired knowledge" (Fulwiler, 1982b, p. 22). Thus, advocates of writing to learn suggest the use of relatively brief periods of writing in class--either so-called freewriting or focused writing--in which students write to discover ideas and explore their interrelationships. Another favored device is the journal (sometimes called a learning log), which "records the student's individual travel through the academic world" (Fulwiler, 1982, p. 18). These contain a wide variety of writing--notes from reading, personal reflections, field notes, free or focused writing during class, and so on.

While my own experience is that such writing activities can be very productive--for generating new ideas, for helping students see implications of those ideas or the interrelationships among them--the emphasis in this private writing is upon the ideas and not upon the form or mechanics. Herein lies real tension for many faculty members who are quite rightly concerned that students also pay attention to the mechanical conventions which insure that a potential reader will clearly understand the ideas. I believe that a way out of this dilemma is to recognize the argument that expressive writing leads to better transactional writing (Fulwiler, 1982, p. 22), and devise assignments that incorporate both in an appropriate sequence.

Adding to faculty concerns is a possible mismatch between what might be called generic writing skills and the specialized conventions associated with writing in particular disciplines. Are students emerging from composition courses able successfully to negotiate the demands of writing in a specialized discipline--and perhaps in several? This question identifies clearly one of the dimensions of writing across the curriculum which requires additional exploration. But I believe that in this also lie some ways to reassure those faculty members concerned about sacrificing content to the demands of writing. In the first place, it is quite possible to agree upon certain fundamental writing characteristics which are appropriate to any discipline, despite the fact that there may be others which differ from one discipline to another. For example, while many teachers of composition as well as instructors in the humanities and social sciences might prefer active verbs, many of our colleagues in the natural sciences (and perhaps even some in the social sciences) insist on the value-free neutrality of the passive voice. Nonetheless, all would agree that the verb--whether active or passive--should agree with its subject. If students at least know the difference between active and passive voice, it will be much easier for them to negotiate any such differences among the disciplines. There is evidence, in fact, that writing among experts in the various disciplines varies less than is sometimes thought. Though there are some differences--paragraph length and development, for example--between disciplines, in many respects the idiosyncracies are greatest within disciplines (Broadhead, Berlin & Broadhead, 1982). It is thus possible to contemplate a "common vocabulary and a common approach to instruction in syntax and style" over the entire range of college writing (p. 238), providing students with basic tools to navigate through the disciplines.

Writing in All the Disciplines

There are, however, differences in writing. The student often feels like a "stranger in a strange land" (McCarthy, 1987). In fact, it might be possible to capitalize upon these differences in the "discourse of communities" to help students appreciate the variations among disciplines in their ways of knowing. On occasion I have team taught courses with colleagues from other disciplines. When a historian and I discuss the same historic event, but from the differing perspectives of our disciplines, I am struck by the dramatically different ways in which we understand and interpret that same event, ways which appear to stem from our disciplinary backgrounds. Many of us believe one of the desirable products of a general education is an appreciation of these differences. If writing is learning, then it seems to me that a focus on writing in the disciplines might be an ideal vehicle for students to acquire an understanding of these differences.

Thus, a move back toward an emphasis on teaching writing in the disciplines seems quite appropriate. While Writing Across the Curriculum is now the most common terminology, some of the early language spoke about "teaching writing in all disciplines" (Griffin, 1982). Writing Across the Curriculum is doubtless snappier nomenclature; "teaching writing in all the disciplines" has the advantage of re-emphasizing the crucial importance of the disciplines.

In fact, a call has recently been made for just such renewed attention to the disciplines themselves: "To survive and prosper, WAC [Writing Across the Curriculum] must offer more than the conversion of every class into a writing laboratory; it must attach itself to the lifeblood of communication by means of which disciplines and professions organize themselves" (Bazerman, 1991, p. 210).

The point of this discussion, however, has been to demonstrate that there is a far closer connection between writing and the disciplines, their approaches, their distinctive ways of knowing--in other words, their content--than many faculty members seem to appreciate. This concept is yet another reason why faculty members, rooted as inevitably as we all are in our disciplines, ought not to feel threatened by a movement which stresses writing in all disciplines. Thus, I believe that it would be useful to adopt the more descriptive language: Writing to Learn in All Disciplines.

The Assignments

These assignments developed out of a growing sense of dissatisfaction with the way several of my courses in political science seemed to be going. Although I had always regarded writing as an important component of my courses, I had also tended to use it in the transactional sense described above (though I had no idea at the time of that terminology): in essay exams or in a term paper tacked on at the end of the course. In the case of the essay exams, their evaluation was almost entirely based upon content--sometimes, I admit somewhat ruefully, the presence of key words or phrases. In fact, it was probably unreasonable to do much more, since students had relatively little opportunity to organize their essays and certainly none to do much rewriting. In the case of the term papers, though the topic had to have something to do with the course, the connection often turned out to be pretty tenuous. And though I typically emphasized the importance of writing the papers carefully, the assignments did not incorporate the elements crucial to helping students develop writing skills: rewriting and revising multiple drafts with constructive feedback on those drafts. But this situation led to a growing sense of guilt and unease, as I realized that despite what were very good intentions, I wasn't having much impact on my students' writing abilities. And thus began my uncertain and tentative journey toward writing to learn.

My objectives for these assignments have grown clearer over the years, but they have always been--at least unconsciously--influenced by the discourse community in which I operate: the discipline of political science. Political science includes a variety of sub-fields which may have specialized conventions for their discourse; political philosophers talk a somewhat different language from those who use quantitative techniques to study voting behavior. But there are no doubt some commonalities, which my objectives reflect. Political science is, for example, much concerned with conceptualization and generalization and is engaged in a continual search for explanation and interpretation. Much writing (need I say "and thinking") is analytical, in the classic sense of dividing a phenomenon into parts in order to understand the whole. Political scientists are frequently confronted with ambiguous and controversial issues, for which they are sometimes asked to propose solutions. In all of this, their obligation is to gather evidence for use in these analyses, explanations, and interpretations, and to support the solutions to problems which they may be called upon to offer. To some degree, then, these assignments reflect these disciplinary ways of knowing.

Assignments in Introductory Courses

The first classes I experimented with were introductory classes of about 60 students. My first decision was to abandon essay exams, and to shift all of the writing to assignments in which students would have the opportunity to concentrate on the quality of their writing, and perhaps (I hoped) prepare more than the one final draft. So as not to give up the content connection of the essay exams, I also sought to integrate the writing assignments specifically into the content of the course. I decided to assign students a choice of topics in which they would be asked to read both pro and con statements and then argue one side or the other. There are a number of supplementary books on the market which provide such statements on controversial topics. Though I cannot say that these first assignments were a stunning success, I was satisfied that students gave more thought to some of the difficult issues of the course than they might have otherwise, and that they paid more attention to their writing than they would have in an essay exam. Reading these papers was more work than reading the same number of exams, but it seemed a worthwhile tradeoff.

Shortly thereafter, by fortuitous coincidence, I had the chance to attend two different workshops, which resulted in a transformation of these early, primitive assignments. One was a workshop which introduced me to the advantages of active, experiential learning. The second was a workshop on Writing Across the Curriculum. Here I was first introduced to Janet Emig's argument about writing to learn, to the importance of conceiving of writing as a process and not simply as a finished product, and to the importance of structuring assignments to produce the desired writing outcomes.

Out of all of this emerged my first Writing to Learn assignments. I retained the pro and con organization, but adopted a more explicitly argumentative format, and provided students with more guidance in writing argumentative papers. These assignments were accompanied by about a dozen pages of general suggestions about writing in which I attempted to reinforce the suggestions about writing as process, which I knew students had received in their freshman composition courses. I structured the assignments so as to produce more than that one final draft by including in-class peer review of a preliminary draft; I hoped that this peer review might include discussions of the substance of the issues as well as a critique of grammar and mechanics. To guide these peer panel reviews, students were provided a checklist, directing their attention to such matters as clarity of the arguments, adequacy of support, organization, and the mechanics of the writing. Three such assignments were scheduled during the quarter, and though this meant giving up three of the forty class periods during the quarter to these peer panels, I concluded that the trade-off was worthwhile.

Assignments in Upper-Level Courses

The next step was to incorporate this approach in upper level courses and to integrate the assignments even more completely into the content of the course. The first of these courses was an introduction to public administration. The pedagogy of public administration has long included the use of cases, in which students are given an opportunity vicariously to wrestle with some of the problems which they might face as public managers. This seemed an ideal vehicle, and so I built Writing to Learn assignments around a series of these cases. The course was organized around seven broad topics, and, for each of these, students were asked to prepare a three or four page case analysis. Students were provided detailed suggestions for writing these analyses, including instructions not merely to describe the cases but to emphasize the explanation and interpretation of the cases. I also suggested that they should attempt to use the details of the case to produce generalizations, or to use generalizations from other course materials to help explain the cases. The student groups were retained, but I converted them from a review and critique of preliminary drafts to a discussion of the ideas and issues contained in those drafts. Students were then required to turn in, two weeks after the case analyses were discussed in class, final drafts of five of the seven. I critiqued these final drafts and returned them with my comments as quickly as I could.

Despite the fact that the case book I used for the course was the leader in the field, neither the students nor I were satisfied with the quality of the cases. The object was to provide active, experiential learning, but the students found the cases remote and abstract, and difficult to relate to. I thus began casting about for an alternative set of assignments. The term administrative state is often used to describe a government in which most of the governing activity is provided by large, bureaucratic organizations--the kind of government found in most western, industrial democracies, including the United States, and obviously the subject of a public administration course. Critics of this form of government abound. Ronald Reagan, for example, was fond of saying that government was not the solution, it was the problem. I decided to adopt this criticism as the theme for the course and build a series of assignments around it.

The first section of the course, for example, is concerned with the size and scope of this administrative state, as well as the history of its growth. Thus, for this section, students were provided with readings on this growth, in the text, in lectures, and in supplementary materials. Careful examination of this growth shows that it has tended to occur in response to crises such as war or depression, or to demands expressed through democratic processes that government step in to solve a problem (often one created when the market system has not performed in ways acceptable to some segment of the public). It seemed natural to ask students to take a position on the proposition "The administrative state is the enemy of the people" and to prepare an argumentative paper defending that position. As in earlier courses, I provided students with detailed suggestions about writing argumentative papers and about the importance of providing evidence and support for their positions. I also gave them general suggestions about writing, particularly about writing as process and the importance of revision and rewriting. The discussion groups were retained as an integral part of the process, but the focus of these discussion was again more on substance than upon the format of the papers. The same theme was used for all of the later assignments, concerning, for example, the role of individuals in large bureaucratic organizations, or the fact that such a government seems unable to control its spending.

I attempted to structure the assignments in such a way as to include expressive as well as transactional writing--and to capitalize on their advantages. Students were asked to bring a preliminary draft for these group discussions, but I emphasized that this shouldn't be their first draft. That first draft should have been a tentative, quite informal one, whose audience was themselves. The objective of this draft was that of all expressive writing (though I didn't use the term)--to surface ideas, clarify them, identify relationships among them, and begin to discover explanations and interpretations. Students were then asked to think of their next draft as addressed to the students in their discussion groups. Addressed to an external audience, these drafts then were to be somewhat more formal, more concerned with organization, form, etc. The final drafts, I suggested, were to be addressed to me--an external and evaluative audience, and were thus to be more formal--transactional writing (though again, I did not use this somewhat intimidating term). Students were asked to provide final drafts for five of the seven assignments.

The last assignments I will discuss were used in another upper-division course, one on politics in the American states. As with the other assignments I have described, these were also the product of a somewhat haphazard and intuitive evolution, only in their final embodiment explicitly incorporating the theories and techniques of Writing Across the Curriculum. The course uses one of the central techniques of political science--the comparative approach--in which comparisons are made among components (here, the American states). These comparisons are made in search of generalizations or in an effort to apply them. This course also lends itself to the use of quantitative evidence, another important methodology in political science. I had for many years asked students to choose a state upon which they wished to become the class expert, and as we moved through various topics to collect data about their state and write commentaries about their state and that particular topic.

It was easy to convert these assignments into a format incorporating writing to learn. The individual topics of the course were grouped together into a series of modules. For each of these units, students were asked to gather data, analyze it, and to prepare a draft commentary to be used as the basis for group discussions in class. One of these modules, for example, focused upon such topics as voting participation, election results, and interest groups in the states. Students were asked to collect data on voting turnout, election results, and information about interest groups in their state. In their commentaries they were asked to provide some possible interpretations or explanations for their findings, drawn from generalizations which had been discussed in class or in their readings. For example, voting participation has seemed sensitive to such factors as the ease with which voters can register and vote or to7 such socio-economic characteristics as average educational level. Did their state behave in the way these generalizations would have led them to expect? Following the group discussions, students were asked to make whatever changes they wished in their drafts, and then to give me what was still a preliminary draft. These were returned with comments for further changes--mostly with respect to content. All of these module drafts were then combined, together with an introduction and a conclusion, into a final integrated report on their state, submitted at the end of the term.

Evaluation of the Assignments

Though none of these assignments has been subjected to systematic evaluation, I can report a number of impressions--drawn from informal student reactions and comments as well as from formal course evaluations. In almost every case, the initial student reaction was one of unhappiness--sometimes downright hostility--at what they perceived to be additional requirements, and requirements that they argued had little to do with political science. Since the final drafts of these assignments were to be carefully written--so as to communicate effectively with the reader--there were the typical objections: "But this is not an English course." The quality of peer reviews and of class discussions (all of which I carefully monitored) was mixed. Though some discussions were a bit aimless, in a number of cases, it was clear that there was constructive exchange of suggestions about papers. And in a large number of cases there was genuinely spirited discussion of the issues. More than once, students mentioned that they had come to the discussion with one position, but had left with another. Some students told me that they had genuinely benefitted from the insights of other members of the group, that they had come to value them as colleagues, and looked forward to the class discussions. In the assignments which asked students to take positions on authentically perplexing questions, there was frustration: one student asked me, with some pique in her voice, "Why don't you ever give us a question to which there is an answer?" But their comments and their papers also suggested a growing realization that there are often two sides to questions and that convincing others of your position depends upon the coherency and cogency of your arguments and the evidence which you provide to support them. I have also become increasingly concerned to take students through courses in such a way that they emerge with the sense that the course is a coherent whole and not simply a succession of chapters and exams. The assignments in the state politics course and those organized around the theme "The administrative state is the enemy of the people" made it easy to emphasize the connections. And it became increasingly clear as the term progressed that students saw these connections. I was heartened one day to have a student ask: "I assume that it is all right if we go back and use some arguments and materials from the assignment before last?" I'm not given to hugging in class--but I was tempted.

Let me sum up, then, the general advantages of these assignments. First, I believe that the structure of these assignments has helped students see that writing is a process, involving a number of stages, which include patient and repeated revision. In those courses where the peer review was focused on exchanged papers, the tendency of students was to see this revision simply as editing for grammatical and mechanical problems, despite my pleas that it should really focus on rethinking what they had prepared. The assignments in which the groups were focused more on content were clearly more successful in this rethinking process. Unfortunately some of the students, as they often do, heard only part of the message, and neglected the editing of their final drafts. The fact that these papers were an integral part of the development of course subject matter, I believe, helped students to see the power of writing as a learning tool and also helped them to see the connections and linkages among these individual topics.

The literature makes clear that the nature and design of writing assignments is crucial to the kind of thinking and learning which they generate. And I believe that these assignments were successful in stimulating some of the higher order, analytical thinking which I hoped to encourage. To this end, students were asked either to make sense out of a body of data or were confronted with deliberately messy, ambiguous problematic situations with which I hoped they would wrestle. Most composition theorists, however, emphasize the importance of clarity and specificity in the assignments. I tried to make the assignments themselves clear--especially in that I expected students to do more than simply describe the problems and that I expected them to use both evidence and argument to come to some conclusion. But I also tried to leave enough uncertainty in the assignments to encourage some creative thinking. There is, however, some fundamental tension between my objectives, which include both writing to learn and learning to write. I want students to grapple with difficult questions, but I also want smooth, graceful writing. But grappling with problems may not enhance the quality of prose. I suspect that we have all noticed how rapidly our writing deteriorates when we encounter new or difficult subjects. Thus when I asked students to confront some of these challenging issues, I may have put them in a position where their writing might show the signs of their intellectual stress. It may be necessary in the evaluation of these final products to recognize the tension between these objectives. Better, perhaps, in another iteration of these assignments to build in more opportunities for expressive writing in which students can work through this intellectual stress before embarking on transactional writing.

Conclusions

I must confess that I haven't yet sorted out all of this information and experience. I do believe that these assignments, because of both the writing and talking to learn dimensions, engaged the students in something of an intellectual discourse as the course developed. During one discussion of an unrelated curricular matter, one student said something like this: "This is the first class I've had in this university where there seemed to be concern for what I was learning." I believe that organizing these assignments around a coherent theme or process helped to identify the class as an integrated whole. Incidentally, it seems to me that this sort of writing, perhaps in learning communities, offers a vehicle for integrating university curricula, which are likewise typically viewed by students as simply a series of courses, having little to do with each other.

There are, however, some warnings to which anyone interested in pursuing these directions ought to be alert. First, prepare to spend a great deal of time thinking about the course and your objectives for it, devising the assignments, handling what is typically a more complex task in course management, and, of course, responding to the students' work. I believe that it is probably also necessary to prepare to sacrifice some of the course content. While writing is a powerful tool for learning, it does not seem best adapted to learning facts and information, and it is undeniably less efficient for transmitting information than the lecture. Be prepared for students--most of them at the beginning, and some of them throughout the term--to resist your techniques or to refuse to take them seriously. For writing across the curriculum to be really effective it must be genuinely across the curriculum. So long as there are other courses where students don't meet such challenges, some of them are likely to make unfavorable comparisons. Be prepared for discussion groups which don't always stay on track and be prepared for expectant looks when you approach some groups, as students wait for you to tell them something (which they continue to see as your job). And unless you're prepared for a good deal of frustration, don't try this unless your institution is genuinely committed to excellence in education and is willing to reward what is likely to be very considerable effort. And unless, of course, you are one of those individuals who gets satisfaction out of knowing that you have taken some very important steps to help students become the kind of active, engaged, discerning learners which they need to be.

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INCREASING TEACHER EFFECTIVENESS
THROUGH
TECH PREP PARTNERSHIPS

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Abstract

Tech Prep partnerships facilitate innovative college teaching in the areas of curriculum content and instructional strategies through the collaborative efforts of secondary/postsecondary, academic/technical faculty members and business and industry representatives. Thoroughly ascertaining what academic and technical skills are essential to prepare students for higher education and for careers in a technological society and incorporating the information into new curriculum necessitate exciting and challenging changes in college classrooms. Examples of teaching excellence throughout the nation including Florida, South Carolina, and Washington will be highlighted in this workshop.

Introduction

The Tech Prep consortia in Florida facilitate innovative college teaching through partnerships among instructors; civic, business, and industry representatives; and secondary school teachers in the development of curriculum. Funded by a grant through the Carl Perkins Act of 1990 under the administration of the Florida Department of Education's Division of Vocational, Adult, and Community Education, the Tech Prep consortium of Santa Fe Community College (SFCC) and the School Board of Alachua County (SBAC) in north central Florida began collaborative planning through an extensive network of curriculum development committees established in 1991.

Why Tech Prep?

The skill level of jobs is becoming increasingly complex and fewer and fewer jobs are available at the unskilled level. Many futurists have predicted that eighty per cent (80%) of the jobs by the year 2000 will require some postsecondary education. Currently, in the United States, only seventy-five per cent (75%) of students graduate from high school with their peers and only sixty-three percent (63 %) of those pursue postsecondary education. There is a vast difference between the skill levels acquired by students when leaving formal education and the employee skill level requirements of business and industry .

The future success of the United States will be based on how well its people compete in the world economic environment. Economist Lester Thurow, in his book Head to Head: The Coming Economic Battle Among Japan, Europe, and America, has linked the success of educators in reaching all students, not just the top twenty-five percent (25%), to the economic success of the United States. The current belief that the United States enjoys the highest standard of living is incorrect. If this country is to succeed in this economic world competition, changes must be made to improve the education of all students.

Business Week reported research about the changes between 1985-2000 in the educational requirements for jobs. The chart in **Appendix I** shows that fewer jobs will be available in the decade of the nineties for high school graduates and that there will be a large increase of jobs requiring one-year vocational certificates and two-year Associate of Science degrees. This fact is being recognized in Florida by employers as documented in a recent study by the state Department of Education. **Appendix II** illustrates that Florida graduates of technical programs at community colleges are earning higher entry level wages than graduates of universities.

Tech Prep addresses these challenges through curriculum and instruction that blend secondary and postsecondary education in a manner designed to increase students' success and to develop students' skills in conjunction with the employment requirements of business and industry.

Tech Prep Instructional Strategies

Although many students learn best in a concrete manner, the majority of the instruction at both high school and college levels has focused on the abstract. This problem of teaching material out of context is explored by David Kolb in Experiential Learning: Experience as the Source of Learning and Development. Howard Gardner, in Frames of Mind: The Theory of Multiple Intelligences, states that, while there are seven different intelligencies, traditional instructional methods address only two learning styles. Many students learn best through intelligences other than the two traditional modes of verbal and analytical which were measured by Alfred Binet. Gardner defines the following measures of intelligence: linguistic, logical and mathematical, kinesthetic, intrapersonal, interpersonal, musical, and spatial. Through Tech Prep staff development workshops involving secondary and postsecondary, academic and technical teams of teachers; instructional strategies and materials which utilize multiple intelligences have been explored.

In their article "Five Standards of Authentic Instruction," Gary Wehlage and Fred Newmann documented the following instructional constructs necessary for engaging students in learning: 1. higher-order thinking, 2. depth of knowledge, 3. connectedness to the world beyond the classroom, 4. substantive conversation, and 5. social support for student achievement. Dale Parnell suggests a theory of relevance and rigor in successful teaching that brings reality to the classroom by restructuring instruction and learning in his book Logo Learning: The Search for Meaning in Education.

Tech Prep focuses on bringing positive changes in instruction to assist instructors at both the high school and college level in achieving success with all students. Instructional strategies and activities that are presented in context, that address multiple intelligences, that meet the demands of authentic instruction (Tech Prep refers to connectedness as applied), and that bring reality to the classroom are developed by innovative teams. Changes are being made through collaborative planning groups comprised of high school and college instructors, school administrators, business and industry representatives, students and parents. The outcomes of these partnerships result in successful college teaching for students enrolled in Tech Prep programs.

Curricular Coordination

Through an ongoing review of existing curricula to eliminate duplication and to identify omissions, teams of secondary/ postsecondary educators and business representatives have designed course sequence plans and updated course content in both technical and academic disciplines. Educators in secondary school and college administrative, instructional, and advisement positions have met frequently with business representatives to share syllabi, textbooks, and workplace readiness suggestions. Currently, over thirty-five Tech Prep programs in the SFCC-Alachua consortium provide seamless coordination between high school and college curricula which benefit both students and their prospective employers.

By assessing the skills that students need to become successful citizens and employees, the SFCC-Alachua Tech Prep consortium initiated systemic educational reform with the involvement of over four hundred secondary and college educators, business representatives, and community leaders. The subsequent successful college teaching has been the result of many hours of cooperative efforts to insure more relevant and rigorous classroom experiences throughout a student's educational progression.

The Tech Prep consortium composed of Santa Fe Community College and the Alachua School District conducted a community wide survey to determine what skills were essential to successful employment in a variety of occupational specialties. The following proficiencies were prioritized by employers in Alachua County: 1. ability to apply oral and written communication, 2. interpersonal skills, 3. problem solving, 4. decision making, 5. higher level reasoning, 6. scientific concepts, 7. mathematical concepts, 8. computer technology, and 9. entrepreneurial skills. Curriculum development teams incorporated the applications for these skills in courses for Tech Prep students.

Articulated Academic and Technical Programs of Study

Tech Prep programs feature a strong core of academic courses in communication, science, mathematics, and computer technology integrated with sequential technical courses. Instructional strategies are designed to emphasize the application of academic principles. A sample Tech Prep course sequence in Marketing includes the following applied academic courses: applied communication, applied mathematics, and biotechnology (applied biology and chemistry). The technical core of courses includes the Introduction to Business Technology and Business Computer Applications I. Designed and updated by business and industry input, both courses prepare students in computer technology and offer three (3) college credits by substitution for the college level CGS 1000 (Introduction to Computers) course at SFCC. The required technical core also consists of Accounting I and Marketing and Distribution I and II. GEB 1011 (Introduction to Business) and MAN 2021 (Principles of Management) are college level dual enrollment courses offered in the senior year for college credit. All Tech Prep programs require four years of mathematics and offer a college level dual enrollment math course to eligible students in the senior year. In the Marketing course sequence, MAT 1033 (Intermediate Algebra) or MTB 11 03 (Business Math) are college level options. The articulation agreement offers twelve (12) college credits to Tech Prep program completers.

An example of successful college teaching in MAR 2011 (Principles of Marketing) at SFCC is a challenging project which integrates academic and technical course content. MAR 20 11 students selected the collaborative Tech Prep program as their class marketing project for the semester. Designing an interdisciplinary unit, the SFCC Marketing instructor formed cooperative learning groups of students to teach them teambuilding skills in planning and conducting a community-wide marketing campaign promoting Tech Prep. Students in the marketing course integrated their activities in their academic courses. In ENC 2210 (Technical Communication), students produced text for newsletters and designed, distributed, and tabulated a marketing survey of prospective Tech Prep students' preferences in television and radio. Working with the college instructor of RTV 1300 (Video Production), marketing students produced a script and video for cable television. Through the curriculum of the MMC 11 20 (Multi-media Writing), MMC 2 1 00 (Journalism for Mass Media) and graphic design courses, the marketing students learned to produce graphics and text for newspaper articles, brochures, and public information advertisements. Local newspapers and radio and television stations provided work-site experiences for students in publicizing various aspects of the Tech Prep program for both student and parental audiences. Though this creative and productive project, which benefited many students and parents in a highly successful community awareness effort, the marketing students realized the relevance of both their academic and technical studies.

The marketing students also helped coordinate a campus-wide career fair promoting technical occupations.

Tech Prep Marketing students who are interested in continuing their education beyond a two-year associate degree have the option to obtain a four-year degree in Business Administration and Management. Twenty-four college credits from the associate degree program are granted toward the junior and senior year of the bachelor's of science degree by St. Leo's College.

The Tech Prep Automotive Service Technology program is another example of collaborative planning between high school and community college instructors and of successful college teaching strategies. A selected number of secondary automotive mechanics courses have been developed which may be substituted for three college level automotive technology courses. Students have benefited from the collaborative efforts of the automotive technology instructor who coordinates his teaching of the use of oscilloscopes with the applied physics instructor's labs illustrating physics principles relevant to automotive technology. The college level applied mathematics course (MTB 1310), which is offered for dual enrollment credit to seniors, was designed to integrate mathematical principles into the automotive curriculum. The work-site learning experiences for students who learn specific skills in their college technical classes and then practice their skill in an actual automotive service job has been a very effective teaching strategy. As technology rapidly changes, the college automotive instructor works closely with the industry representatives to update the curriculum. Both graduates and employers seem very satisfied with the employment readiness provided resulting from this integration of workbased learning and relevant college instruction.

Secretary's Commission for Achieving Necessary Skills

An extensive research project by the United States Department of Labor was completed in 1991. The Secretary's Commission on Achieving Necessary skills (SCANS) conducted a twelve month study of business owners, employees, human resource managers, and union officials to determine the level of skills required to enter employment. The document entitled What Work Requires of Schools: A SCANS Report for America 2000 defined the skills needed, proposed acceptable levels of proficiency for the skills, and suggested effective ways to assess proficiency. William E. Brock, SCANS chairperson, reported that after lengthy interviews with employers in a wide range of jobs, "the message was universal: good jobs will increasingly depend on people who can put knowledge to work. What we found was disturbing: more than half our young people leave school without the knowledge or foundation required to find or hold a good job."

Contributing factors to this dilemma which has dramatically changed the conditions for young people's entry into the world of work include the globalization of commerce and industry and the explosive growth of technology in the workplace. The SCANS research summarized in Appendix IV verifies effective job performance in terms of five competencies and a three-part foundation of skills and personal qualities that are essential to successful employment. The study also concluded that these eight essentials should be taught in an integrated fashion that reflects the workplace contexts in which they are applied. The implications for successful college teaching are obvious: learning skills "in context" will be most effective by placing learning objectives within a real environment rather than insisting that students first learn in the abstract what they will be expected to apply. The need for ongoing partnerships among academic and technical instructors and business partners is readily apparent, also. To assist instructors in implementing the teaching of SCANS competencies, a partnership among secondary and postsecondary educators and business representatives with the leadership of Dr. John Hansen, Florida State University, developed inservice modules. The SFCC Tech Prep Consortium Coordinator served on the SCANS project advisory team in the design process and worked with college instructors and students in modeling desired teacher competencies. The focus of this SCANS staff development project was to assist instructors in modifying their instructional strategies to address multiple intelligences, cultural diversity, and team building through cooperative learning. In a Tech Prep Summer Institute, the SFCC Tech Prep Coordinator, college instructors, recent SFCC graduates, and business representatives worked with students in cooperative learning groups to increase all participants' understanding of the need for improving interpersonal skills to succeed in the workplace. The partnership among SFCC, the School Board of Alachua County, the Girls Club, and numerous corporate sponsors provided an opportunity for students to participate in career exploration activities in eight technical occupations and in work-sites visits to discuss how employees use communication and interpersonal skills and other academic concepts in their jobs.

Partnerships for Integrating Academic and Technical Education

TriCounty Technical College in Pendleton, South Carolina, in partnership with their Tech Prep consortium, PACE (Partnership for Academic and Career Education), has sponsored exemplary planning and staff development activities in integrating the SCANS competencies in the faculties of both academic and technical disciplines. Appppendix V outlines the components of the college Tech Prep partnerships and of the competency areas addressed in the college applied courses.

As a partner in the Seattle Tech Prep consortium, South Seattle Community College has developed over twenty college level applied curriculum courses. Apppendix VI describes the courses as well as the components of their successful college teaching in the college applied courses.

To implement the continuously changing course content and innovative instructional strategies, educators need extensive staff development and common planning time with colleagues in other academic and technical disciplines and with business representatives. Opportunities for instructors and their students to visit and to study work sites are imperative in successful Tech Prep college teaching. The examples of effective integration and updating of curricula and instructional techniques were accomplished through partnerships among secondary and postsecondary educators, academic and technical faculty members, and responsive business and civic representatives. Successful college teaching is enhanced by collaborative efforts designed to prepare students for global competition and cooperation, further education, and for a career in an increasingly complex technological society.

APPENDIX VI
SCANS

FIVE COMPETENCIES

Resources: Identifies, organizes, plans, and allocates resources

A. Time--Selects goal-relevant activities, ranks them, allocates time, and prepares and follows schedules
B. Money--Uses or prepares budgets, makes forecasts, keeps records, and makes adjustments to meet objectives
C. Material and Facilities--Acquires, stores, allocates, and uses materials or space efficiently
D. Human Resources--Assesses skills and distributes work accordingly, evaluates performance and provides feedback

Interpersonal: Works with others

A. Participates as Member of a Team--contributes to group effort
B. Teaches Others New Skills
C. Serves Clients/Customers--works to satisfy customer's expectations
D. Exercises Leadership--communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies
E. Negotiates--works toward agreements involving exchange of resources, resolves divergent interests
F. Works with Diversity--works well with men and women from diverse backgrounds

Information: Acquires and uses information

A. Acquires and Evaluates Information
B. Organizes and Maintains Information
C. Interprets and Communicates Information
D. Uses Computers to Process Information

Systems: Understands complex inter-relationships

A. Understands Systems--knows how social, organizational, and technological systems work and operates effectively with them
B. Monitors and Corrects Performance--distinguishes trends, predicts impacts on system operations, diagnoses deviations in systems' performance and corrects malfunctions
C. Improves or Designs Systems--suggests modifications to existing systems and develops new or alternative systems to improve performance

Technology: Works with a variety of technologies

A. Selects Technology--chooses procedures, tools or equipment including computers and related technologies
B. Applies Technology to Task--Understands overall intent and proper procedures for setup and operation of equipment
C. Maintains and Troubleshoots Equipment--Prevents, identifies, or solves problems with equipment, including computers and other technologies

SCANS

A THREE-PART FOUNDATION

Basic Skills: Reads, writes, performs arithmetic and mathematical operations, listens and speaks

A. Reading-locates, understands, and interprets written information in prose and in documents such as manuals, graphs, and schedules
B. Writing--communicates thoughts, ideas, information, and messages in writing; and creates documents such as letters, directions, manuals, reports, graphs, and flow charts
C. Arithmetic/Mathematics--performs basic computations and approaches practical problems by choosing appropriately from a variety of mathematical techniques
D. Listening--receives, attends to, interprets, and responds to verbal messages and other cues
E. Speaking--organizes ideas and communicates orally

Thinking Skills: Thinks creatively makes decisions, solves problems, visualizes, knows how to learn, and reasons.

A. Creative Thinking--generates new ideas
B. Decision Making--specifies goals and constraints, generates alternatives, considers risks, and evaluates and chooses best alternative
C. Problem Solving--recognizes problems and devises and implements plan of action
D. Seeing Things in the Mind's Eye--organizes, and processes symbols, pictures, graphs, objects, and other information
E. Knowing How to Learn--uses efficient learning techniques to acquire and apply new knowledge and skills
F. Reasoning--discovers a rule or principle underlying the relationship between two or more objects and applies it when solving a problem

Personal Qualities: Displays responsibility, self-esteem, sociability, self-management, and integrity and honesty

A. Responsibility--exerts a high level of effort and perseveres towards goal attainment
B. Self-Esteem--believes in own self-worth and maintains a positive view of self
C. Sociability--demonstrates understanding, friendliness, adaptability, empathy, and politeness in group settings
D. Self-Management--assesses self accurately, sets personal goals, monitors progress, and exhibits self-control
E. Integrity/Honesty--chooses ethical courses of action

Competency Areas

1. Oral/Written Communication
2. Technical/Professional/Ethical
3. Information/Date Processing
4. Mathematical/Computational
5. Critical Thinking/Problem Solving
6. International/Intercultural
7. Interpersonal/Teamwork

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DIARY OF A DESIGNING PROFESSOR
(Or How I Went Beyond Content Expertise!)

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Abstract
This panel will discuss effective teaching strategies necessary for creating successful classroom environments and for promoting student learning. Based on research and practical experience in traditional and distance education classrooms, the panel will discuss how content expertise can be enhanced to ensure desired learning outcomes. Specific instructional strategies, learning activities, and communication techniques will be presented. A case study will detail the planning process.

If research shows that content expertise alone is not enough to insure effective instruction, how can we incorporate the factors and strategies that have been identified as desirable? This narrative is the personal record of one professor's attempt to design a new course with these things in mind.

Day 1: Set and Analyze Goals

On this day I reviewed models for designing instruction. I wanted guidance in a systematic approach to my planning. I settled on the Dick and Reiser model in Planning Effective Instruction because it seemed less complex and quicker than the other models. This model gives several steps for planning, the first of which is to set goals.

In setting the goals for my new course, I looked at the brief syllabus that had been written when the course was submitted to the approving bodies at Valdosta State University (VSU). I examined the goals given on this syllabus and refined and restated them to fit my knowledge base and my teaching style. I ended up with ten goals.

I then analyzed each goal, listing all definitions, concepts, and skills that were implied within that goal. Next I listed any prerequisite knowledge and skills that students would need to have before attempting to learn any of the identified new course information and skills. I ended up with one two-page list for each goal.

Day 2: Analyze Student Characteristics

On this day I thought about my students. Though I do not know each of the students who will be in the class, I have taught students who are enrolled in the program and decided to base my analysis on what I know about them.

Using a mental profile of my previous students, I looked at each of the items on my lists and determined whether students would know or be able to do each of the things listed. I then categorized each item into one of two categories, "new" or "old" information and skills. Of course, I ended up with more new knowledge and skills than prerequisites; however, I was surprised to realize that some of what I might have expected them to know before coming to my class would have to be considered "new" rather than "old."

Day 3: Write Objectives

Next I used each item of new information, concepts, skills to write a student performance statement. This was a detailing of what I expect them to be able to know or do at the end of the course. It also gives the conditions under which they will demonstrate each. I ended up with 58 objectives or student performances.

Day 4: Cluster Objectives

Clustering the objectives is grouping all those objectives into topics. The model does not call for this step. It is one I stole from another of the models I considered. It seemed to me to be an easy way to organize all those objectives into a more manageable format so that topics could be assigned to class meeting times.

There seemed to be several ways to cluster the objectives. For the first time in this process I felt confused. I admit that I initially tried to cluster into ten discrete topics since there were going to be ten class meeting times. (This course meets once per week for ten weeks.) When that did not work, I used my intuition (I guess) to guide me through a grouping that made sense to me. I clustered the objectives into eighteen topics and then sequenced and grouped the topics by ten dates. I felt I had really accomplished something when this was finished, but I did not feel totally confident that the grouping and sequencing were correct.

Day 5: Develop Assessment
Next the model calls for planning the assessment. I already knew that I wanted the students to develop a comprehensive plan as their final project and to present it to the class. I also knew that I wanted them to have at least two exams. Other than these, I had not made decisions about assessment.

I looked at the goals and objectives to see what it was I had stated that I wanted students to be able to know and do at the end of the course. For the exams, I grouped the objectives into two databases of concepts and skills. I then wrote test items that corresponded with each objective so that I could be sure I tested for each performance. Some of the items were objective, some were short answer, and some were essay. I then made a key for scoring the tests. It was exciting to know that I would not be working on the development of a test at the last minute. I was feeling great about being so prepared for this course.

Day 6: Select Text/Readings
Now I had to select my text. I tried to find one that covered all the content I planned to include, but had no success. I found two that came close and considered choosing both. When the bookstore told me that each of these texts were over $80 each, I nixed that idea. I do not believe in using cost as the primary selection criteria, but I do believe that it should be considered. Since neither book was exactly what I wanted, I settled on using readings from various sources. Of course, that means more work for me - finding them, checking copyright, copying them, sending them to be duplicated.

Day 7: Select Instructional Strategies/Media
So far I was pleased that I had been able to do the steps in the model without much difficulty. Selecting the strategies and media was the first time I really felt overwhelmed. I wondered why I had felt so good about what I was doing until now. Then I realized that this was the point at which I had left my content expertise and had started concentrating on how I would deliver the instruction. I was beginning to go beyond!

I decided that the best way for me to proceed was to take ten sheets of paper--one for each class meeting--and write a lesson plan for each class. My goal was to incorporate as much of the information that I had gotten from Drs. Keller and Wiley as I could. There seemed to be a lot to consider. What I ended up doing was developing guidelines for myself by addressing each of the identified factors individually.

Interactivity: I felt my teaching style already included student involvement, but it seemed to be more critical for me to insure it in a distance education class. I wanted to make a conscious effort in this area. As I wrote each lesson plan, I set small time blocks and chunked the content so that I would engage the students during each block. I wanted to have no more than ten-fifteen minutes of talk from me without some student-centered response or activity.
Variety of Activities: I also felt that this was another of my strong points. I had always used a variety of activities. Now I needed to select those that were pertinent for my students and for the distance learning environment. I used many of the strategies suggested by Drs. Keller and Wiley and added some of my own. Those that worked well for my class were discussions, simulations, case studies, student presentations, graphic representations, individual, small, and large group work. Demonstrations were given by the students as well as guest speakers.

Change of Pace: This factor, I thought, would be critical for distance education. I had taught long night courses in a traditional setting and knew that people who may have worked all day must often be switched on. I wrote the lesson plans so that I changed pace by going from teacher-centered to student-centered and from talk to activity, from graphics to print, from individual to group.

Use of Visuals: I am a visual learner, so I pay special attention to visuals in my teaching. I try to always provide a visual, even if it is an outline of word cues, when I "lecture." Some of the visuals that I found for this course included several cartoons and two videotapes (I like to use cartoons because they communicate the message so succinctly). Both of these media caused a copyright concern that still has not been answered to my satisfaction. However, I did use them. For my self-designed visuals, the format that I was accustomed to did not work with our distance education equipment, so I had to constantly redo what I developed.

Practice with Feedback: In order for the students to develop the final project and to succeed at the exams, I knew I had to give them practice exercises. After the students completed assignments, I would have to give them prompt feedback to make sure they understood the things they needed to correct. Simulations, case studies, and groupwork were practices in various components of the final project. Each student's presentation of readings was a practice for the presentation of the final project. I planned oral feedback for the many in-class discussions, simulation, and case study activities. I scheduled written assignments so that they were not only appropriate to the content and assessment methods, but so that they were due at a time when I could provide prompt feedback. We often used FAX.

When I had completed the ten lesson plans I felt fabulous! I have never been so well-prepared for a course in my life!

Day By Day: Implement, Evaluate, and Revise Instruction

Now I am in the eighth week of my course. After each class I have adjusted the lesson so that I can do it better next time. I am thinking of changing some of the materials and activities. I will definitely change the sequencing and some of the reading assignments for next year's course.

I cannot say that all my lessons went perfectly. (There have been many "bugs" in my plans and presentations.) But I can say that this has been one of my most challenging and rewarding experiences in planning and teaching. I RECOMMEND IT TO YOU ALL!

SLEEPING WITH THE ENEMY:

MAKING OUTCOMES ASSESSMENT WORK IN THE CLASSROOM

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Abstract
The Outcomes Assessment movement is having a major impact on colleges across the nation. In New Jersey, the state-run Outcomes Assessment program was canceled a few years ago when its funding was eliminated. Remarkably, community college faculty and administrators are continuing the effort voluntarily, both at local campuses and on a statewide basis. What is motivating us to expend time and effort on a program that has been perceived as burdensome, judgmental, and "unacademic"? We are convinced that a clear, academically sound statement of measurable student goals and objectives can lead to dramatic improvements in course and program content and methodology. The author will describe the ongoing effects of this process on the AS Chemistry program, and on freshman and sophomore level (General and Organic) chemistry courses.

Outcomes Assessment, mandated by State Boards of Higher Education or their equivalents, by Governors, or by State Legislatures, is having a major impact on colleges across the nation. In New Jersey, the state-run Outcomes Assessment program was canceled a few years ago when its funding was eliminated. Remarkably, community college faculty and administrators are continuing the effort voluntarily, both at local campuses and on a statewide basis. What is motivating us to expend time and effort on a program that at times has been perceived as burdensome, judgmental, and unacademic? We are convinced that a clear, academically sound statement of measurable student goals and objectives can lead to dramatic improvements in course and program content and methodology. I will describe the ongoing effects of this process on freshman and sophomore level (General and Organic) chemistry courses.

Traditionally, content (already overwhelming and ever-growing), classroom methodology (predominantly lecture, with experiments designed to verify previously introduced theory), and assessment techniques (commonly objective examinations) have dominated chemistry teaching at the introductory level, as they have for most content-based courses. Whether we want or intend it, such factors have implicitly driven student outcomes and colored not only what we expect from our students, but also what they expect from the course. This result has contributed to the mutual sense of alienation in science education (Tobias, 1990) and has been criticized not only by experts in education and learning styles, but by the scientific establishment as well (American Chemical Society, 1989; American Association for the Advancement of Science, 1990; National Science Foundation, 1990).

Carefully thought-out goals and objectives, if developed and owned by the teacher, often necessitate profound changes in the content, teaching methods, and assessment techniques of the course. The content of introductory chemistry courses is a hotly debated topic, in the literature as well as at conferences and department meetings (Bodner, 1992; Spencer, 1992). It is a subject beyond the scope of this paper, but there is a consensus that a reduction in the quantity of material presented is an essential prerequisite to further reform. As far as teaching and assessment methods are concerned, the modem pedagogical toolbox is filled with methodologies which can be employed to foster and measure the desired outcomes: cooperative and collaborative techniques, critical thinking exercises, demonstrations and simulations, discovery or guided inquiry laboratories, information retrieval and analysis, and writing (papers, lab reports, and essay questions).

In this paper, I will draw on my experiences with Outcomes Assessment in New Jersey, as a participant at the State-wide level, as a member of a college task force, as a developer of program goals and objectives in the Science and Engineering Department, and finally as the teacher of two courses in particular: General Chemistry and Organic Chemistry. The focus will be on changes instituted by my colleagues and myself largely in response to goals and objectives that we had developed.

Outcomes Assessment in New Jersey

The New Jersey Board of Higher Education created the College Outcomes Evaluation Program (COEP) in June, 1985. Due to the economic downturn in the state, the program was canceled for lack of state funding in 1991. Although COEP was administered by the New Jersey Department of Higher Education and funded from the state budget, as determined by the Governor and the Legislature, from the outset, the program was designed and controlled largely by faculty and administrators from the colleges in the state. The higher education community in New Jersey is quite complex: large public (Rutgers, New Jersey Institute of Technology, University of Medicine and Dentistry) and private (Princeton, Fairleigh Dickinson) universities; baccalaureate and Masters level colleges, both public (the state college system, centrally administered by the Department of Higher Education) and private; and the county colleges, independent two-year associate degree granting institutions, controlled and funded by the counties, but deriving a significant amount of funding from the state. All sectors were included in COEP, both as mandated (and in some cases reluctant) participants and as contributors to its development and final form.

COEP had five principle components: (1) a General Intellectual Skills (GIS) test; (2) general education; (3) major subject programs; (4) student development; and (5) community impact. Of these, the GIS test was the most innovative and controversial. The COEP committee decided to develop its own instrument, intended to be administered to students at the beginning of the freshman year and again at the end of the sophomore year, in order to assess the effect of their college experiences on their intellectual performance (the value-added approach). The test was developed by the Educational Testing Service (ETS); at the insistence of COEP, and with the assistance of many college and university faculty members, ETS produced an exam that is quite unlike the familiar multiple choice exam for which it is famous. The student is given one of a number of tasks. Typically, a task will consist of material for the student to read and answer questions about. The major assignment is to write a paper or report. The tasks cover a wide range of topics, from history to sociology to art to poetry to science. The exam was intended to serve as a means of evaluating institutions rather than individual students. Although many were suspicious of the use to which it might be put, there was general agreement among teachers that it represented an innovative approach to assessment. ETS now owns the test and is marketing it to college and university systems. Dr. Angela Bodino, of the English department, and I have received a PEW grant in order to investigate the use of the GIS model as a way of evaluating students' critical thinking abilities and as a way of presenting material to enhance critical thinking.

While COEP was in effect, Raritan Valley Community College (RVCC) was actively involved in all of its components, with particular emphasis on the general education and major program evaluations. I was a member of the college-wide committee which reviewed program goals and objectives, and I helped develop such goals and objectives for the AS in Chemistry and the AS in General Science programs. Like most faculty members, I formulated and revised student outcome objectives for the courses that I taught. After the demise of the state-wide COEP program, RVCC has continued its own outcomes assessment at the general education, program and course level. This voluntary continuation is motivated partly by the perceived benefits of outcomes evaluation to the institution, to the faculty, and to the students, and partly by the uncertain but realistic prospect that the state would reimpose a similar mandate when and if funds became available.

Perhaps the most remarkable recent development has been the formation of the New Jersey County College Project on General Education by seventeen of the nineteen county colleges for the express purpose of developing goals, objectives, and assessment criteria for general education on a state-wide basis. I am a member of one of its four task forces, staffed by volunteer faculty and administrators from each of the colleges. Goals and objectives for general education have been written; we are currently engaged in developing assessment criteria and, if necessary, instruments for these objectives. The results will be distributed to the member institutions, undoubtedly debated and revised, until a final product is written. Each college will be free to adopt all or part of the general education assessment package. The democratic, participatory, grass-roots character of this effort is a continuation and expansion of the best spirit of COEP and, if successful, will be a model for further state-wide assessment effort.

Developing Goals, Objectives, and Assessment Instruments

There is an extensive body of literature dealing with outcomes assessment; this paper is not intended as a review or overview of the field. In my experience, one of the most lucid and practically oriented experts in the field is Professor Lion F. Gardiner of Rutgers University, who was a major consultant to COEP and is now assisting the

County College project. Two of his most useful publications are a Handbook providing practical assistance to educators trying to develop assessment plans (Gardiner, 1991) and a resource paper listing (with brief commentary) a selection of publications covering a wide range of educational theory and practice in this area (Gardiner, 1992). Both are available from the New Jersey Department of Higher Education.

> Some of the flavor of Gardiner's approach can be sensed in an anonymous quote he uses: "If you don't know where you're going, you'll probably end up someplace else."

According to Gardiner, there are three crucial organizational components of a successful course or program: inputs (human and nonhuman resources), processes (courses, classroom techniques, lab experiments), and outcomes (student knowledge, skills, and achievements). In an operational sense, these three components are listed in their temporal order: one starts with the inputs, applies the processes, and concludes with the outcomes. In planning, however, the order is reversed: the first component to be determined should be the student outcome (what result do we want to obtain). Processes which can produce those results can then be devised, and the inputs necessary to support those processes are obtained.

This order seems at first glance to be a simple, even self-evident approach, but our collective teaching experience abounds with examples that are anything but consistent with it. In my own field of chemistry, for example, most of us haven't (until recently) spent much time thinking or talking about what we expect of our undergraduate students, particularly in the freshman and sophomore years. Our implicit long-term goal seems to have been to turn them all into chemists like us, this despite the fact that, even at research universities, over ninety per cent of the students in introductory chemistry courses are not chemistry majors, and even those who are more likely to be heading for medical or dental schools than chemistry graduate programs. The processes of the courses (content, methods, laboratory experiments, evaluation methods) are geared to this vague and implicit outcome, which for most of the students is both unobtainable and inappropriate.

There are, of course, student outcomes for an introductory chemistry course which are based on the acquisition of knowledge, or on the development of skills which are well-formulated and appropriately evaluated in traditional course formats. However, there are some outcomes which, once they are chosen and committed to, require that we carefully examine our courses and make some profound revisions in the teaching processes. In the last part of the paper, I will summarize a few of the revisions that I and my colleagues have made in response to two objectives developed for the AS Chemistry program.

Objective 1. *The student will exhibit an understanding of the scientific method: observe, make inferences, classify and organize information, analyze and synthesize data, draw conclusions, and communicate those conclusions in writing.*

At first glance, this seems to be a straightforward, if ambitious, objective. In the usual course, however, the methods employed hardly promote, much less guarantee, the desired outcome. The Scientific Method (in capitals) is presented in a lecture, perhaps with illustrative examples, for the students to memorize. In the laboratory, students perform experiments presented in a cookbook format, with numerical results inserted into blanks on preprinted data sheets which are torn out and handed in. Although the student may become skilled at certain lab techniques (which fulfills an entirely different objective), he or she may not understand the methods of science in any meaningful way, nor, in the event that he or she does understand, has there been any opportunity to demonstrate or exhibit that understanding.

Perhaps the most promising innovation in the pursuit of understanding in the laboratory is the Discovery or Guided Inquiry approach to the teaching of introductory chemistry laboratories (Pavelich & Abrahams, 1979; Allen, et. al., 1986, Ricci & Ditzler, 1991). As developed by Ditzler and his colleagues at Holy Cross, the teaching of general chemistry is driven by the laboratories: topics are usually introduced first in the lab where the students are given a problem or concept to explore, develop (with guidance from the instructor) hypotheses, experiment with different methods, decide how to analyze and report their data, and synthesize the entire class results into a conclusion that leads to insight into the underlying theoretical principles. The challenge to chemists is to develop open-ended experiments which are within the capabilities of beginning chemistry students, feasible with the equipment and supplies available, and yet interesting and profound enough to stimulate productive thought.

One of the simplest and most intriguing of the experiments developed at Holy Cross is "Pennies," an experiment which I have used at the beginning of the chemistry sequence in conjunction with a unit on measurement. The lab revolves around the question: "What happens to a penny as it ages?" Before going into the lab, the class as a group develops hypotheses (e.g., it loses mass), supported by reasons (e.g., frictional wear), and develops an experimental protocol to test the hypotheses (e.g., weighing pennies sorted by their mint year). When data has been gathered, the class discusses methods of analyzing the data (plotting mass against mint year). In this case, the pennies show no clear trend in mass gain or loss from year to year, but there is an abrupt drop in mass in 1982. This generates a new set of hypotheses to explain this discontinuity, which in turn must be tested (e.g., the densities can be determined to check for a change in composition, which is indeed the case; most of the copper was removed from the penny in 1982). If time permits, more extensive investigations can be performed. The beauty of this experiment is in its deceptive simplicity and accessibility even for the beginning student. Its openendedness and potential for fairly sophisticated elaboration are hallmarks of a well-conceived discovery experiment.

A second example is one that I have devised for a different group, second semester students in Organic Chemistry. One of the early experiments in a unit called Organic Qualitative Analysis (in which the students identify unknown compounds) is one in which the solubility characteristics of classes of compounds is explored. Traditionally, the students are presented with the classification scheme in a lecture with some theory and reaction equations to support it. They are then sent into the lab to verify the solubility patterns for known compounds and to classify an unknown compound by determining its solubility. In restructuring this experiment as a discovery lab, I have followed the lead of my colleague Roger Johnson, a plant biologist, who devised a similar restructuring for an experiment in the classification of twigs and branches based on a number of physical criteria.

In my variation, the class is given a set of known compounds (typically about ten distinct functional group classes) and a set of solvents (five or six aqueous and nonaqueous solvent mixtures). The class as a group develops hypotheses, trying to predict, based on their chemical knowledge and experience, the solubility behavior of the various compounds. They discuss an experimental approach, collect data in the lab, and analyze the results. With some guidance from the teacher, if all goes well, the class produces a classification scheme essentially identical to the one in the textbooks, but as a product of its own investigations.

Objective 2: *The student will be able to utilize information from the enormous and rapidly expanding chemical literature, both in libraries and in on-line interactive databases.*

This objective is realized through the completion of three categories of activities.

1) Literature search paper:
Students in the second semester of General Chemistry were given the following assignment:

> Write a paper describing the work of a prominent chemist of the last two centuries. Students will work in groups of two or three, choosing a chemist whose contributions are regarded as important. A reasonable starting point might be the list of Nobel Prize winners in chemistry, or the chemists whose work is described at various places in your textbook. Once I have approved your group and choice of a subject, you will find the necessary sources, put together a rough draft (which I will be glad to look at, if you wish), and then write the paper for submission. Each group will submit one paper; each member of the group will get the same grade for the assignment. Describe the major themes of the chemist's scientific work. If possible, discover how he or she regarded his or her place in the profession. Was there anything unusual in the way that the subject became a chemist, approached the field, or conducted his or her career? Describe the impact of the chemist's work on the science of chemistry and the chemists who followed. You must cite at least three sources, only one of which can be an encyclopedia article (no textbooks allowed). If possible, at least one source must be written by the subject of the paper. When the assignment was first announced, many of the students reacted with some dismay (a paper in a science

class?). Most of them expressed positive feelings about the assignment and their papers by the end of the semester, ranging from grudging acceptance to great enthusiasm. One experience particularly stands out: two female students chose to write about Dorothy Crowfoot Hodgkin, a pioneer in the development of X-ray crystallography who won the Nobel Prize for Chemistry in 1964. Their investigation of her career gave them a vivid lesson in both the opportunities and the obstacles facing women in science.

2) Individual experiments:

As the final laboratory experiment in Organic Chemistry II, the students were asked to select a synthesis from the literature, to adapt it if necessary to the equipment, supplies, and scale of the available resources, to perform the experiment, and to write up their results. Problems chosen ranged from the simple to the complex; a few students were ambitious and creative enough to put together a multistep synthesis. In addition to gaining familiarity with the literature and the search procedure, most students were gratified by a sense of ownership not felt in doing a textbook experiment.

3) Comparative articles:

When buckminsterfullerenes ("buckyballs") were first discovered and characterized, they caught the imagination not only of chemists and other scientists, but of the general population as well. My colleague and fellow chemist Sheila Cancella was inspired to use these appealing molecules to stimulate discussion of the various modes of scientific reporting in the literature. She handed out three articles: one from a refereed scientific journal (Science), one from a trade magazine (Chemical and Engineering News), and one from the popular press (TIME), all describing the discovery and structural features of buckyballs. The class discussed the similarities and differences in the treatments of the basic facts. Many scientific developments of the last few years lend themselves to this treatment, e.g., cold fusion, AIDS research, the Hubble space telescope, global warming.

In conclusion, despite the doubts and fears that outcomes assessment can engender in the teaching faculty, a carefully crafted set of objectives can trigger important improvements in course content, process, and evaluation. The lesson learned from the New Jersey experience has been that ownership and control by faculty and by local institutions is a key element in a positive and successful program.

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PARTICIPATIVE LEARNING EXPERIENCES IN THE PROFESSIONAL STUDIES CLASSROOM

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Abstract

Often the professional studies course outline and classroom learning model are dominated by concern for a common body of knowledge. The result: a design that ignores student interaction and the development of critical thinking and communication skills. Reflections from the author's personal journal will highlight efforts to address this dilemma with a combination of individual and group devices including: computer assignments, case studies, role playing and written projects.

Introduction

My journal summaries reflect experiences with a Cost Accounting course section conducted during the 1993 Fall Semester. The course is required of all accounting majors at the university. Twenty five (25) students, predominantly full-time undergraduates in their junior year, were enrolled. The course outline contained the following description:

> Cost accounting is an exploration of the issues involved with providing accurate, relevant product cost information to operating managers. Such input is essential in an entity's pricing plans as well as an integral part of its long term planning. The course will examine cost structures, cost accumulation systems as well as appropriate planning and communication tools. Written assignments, case studies, homework problems, and group discussions will comprise much of the classroom interaction. Emphasis will be placed upon the controller's role as part of the management PROCESS in an organization.

Course requirements are summarized in the table below:

Activity	Percentage of Final Grade
2 Quizzes at 20%	40%
Computer Project	15
Class Participation/Activities	20
Final Examination	25
TOTAL	100%

Activities were defined in the course outline as:

1. *QUIZZES (40%)* will be based upon material covered through the prior class session. Each quiz will be comprised of two parts: objective and problem solving. The former will be multiple choice, true/false, etc. in nature. The later will be based on homework assignments and will require numerical and analytical analysis as well as some written explanation.

2. The *COMPUTER PROJECT (15%)* will be comprised of no less than 2 projects covering selected topics from the course. The result of this endeavor will be a computer analysis and a written assessment of the circumstance. A computer template, based upon LOTUS 123, will be provided for your use in completing this assignment. Grading will be based upon coverage and depth of the finished product. The project will be due on the last day of class. Preliminary submission(s) for review and comment by the instructor are welcomed.

3. *CLASS PARTICIPATION (10%)* will be based upon each individual's contribution to class discussion and interaction. Evidence of performance here will be evidenced by a minimum of the following:

   a. The instructor's evaluation of one's contribution to class discussion of assigned materials.
   b. An individual's contribution to small group discussions as rated by peers.
   c. Random collection of assigned material by the instructor.

4. Upper level accounting students benefit from both classroom and outside experiences. Opportunities to get involved in numerous outside endeavors will be available during the semester (e.g. the Accounting Club, Institute of Management Accountants, Connecticut Society of CPA's). *CLASS ACTIVITIES (10%)* will be based upon on-campus (1 point per activity) and off-campus (2 points per activity) endeavors.

5. The *FINAL EXAMINATION (25%)* will be similar to the quizzes as described above and will consist of both a take-home and an in-class segment.

Overview

External Environment

Higher education's benchmark for undergraduate Accounting education have been defined by the Accounting Education Change Commission (AECC). The AECC was appointed in 1989 by the American Accounting Association and supported by the Sponsors' Education Task Force, which represents the largest firms in the United States public accounting profession. The group focuses on improving accountants' academic preparation so that entrants possess talents required for success in accounting related careers (Accounting Education Change Commission (AECC), September, 1991).

The AECC has issued a number of Position and Issues Statements since its inception (see AECC Position and Issues Statements, Appendix A). Most pertinent to this paper is its stance on course content and instructional methods. It proposes that the main purpose of course content should be to foster a foundation which encourages continual learning.

Hence, the group believes instructional methods should strive to teach students how self learning can occur. This process is encouraged through classroom environments which actively involve members in the learning process, as opposed to those which passively instruct the recipients. Recommended pedagogy includes, but is not limited to:

1. Solving unstructured problems that require utilization of a variety of information sources.
2. Learning by doing.
3. Incorporating technology in the learning process.
4. Group work wherever possible.
5. Teaching methods that build written and oral communication skills (AECC, 1991).

The AECC's stance on such matters offers a template for transforming undergraduate accounting teaching. Historically, the curriculum has been driven by the desire to satisfy a stated outcome, the uniform Certified Public Accountant Examination. Class methods focused on the accomplishment of knowledge transfer in support of this objective. One AECC statement specifically advocates the separation of academic studies and professional accounting examination preparation (AECC, July 1991).

Such advocacy is only one stroke on the educational canvas. Academic institutions must take ownership for fostering environments that encourage the development of new and different teaching methodologies. However, old habits die hard. Students are often inherently comfortable with traditional techniques. And, their class evaluations continue to serve as a barometer of a professor's classroom effectiveness. The resulting attitude of the professors at many institutions of higher education is therefore guarded.

Reflection #1: Accounting is not the only instructional field which must deal with the challenge of addressing a common body of knowledge. Hence, literature is readily available for review. A dilemma common to this environment is the content coverage myth. When the goal of a course is coverage, efficiency and accuracy in delivering information can mistakenly be used to measure instructional effectiveness. Such a philosophy ignores student questions and classroom interaction, integral parts of critical thinking skills development. These mechanisms allow students to practice thinking while they acquire knowledge (Kurfiss, G.J, 1989).

Just being exposed to content does not constitute learning. The classroom lecture is just a part of this process. Much of the struggle for knowledge takes place outside the classroom. Reading and reflecting upon assigned material as well as studying, summarizing, and organizing lecture notes exemplify this part of the model. Hence, instructors confronted with content intensive subjects can aid students by designing their class so that some of this struggle occurs during the class sessions.

Such actions provide students with the opportunity to solicit help on topics that are not clear. In other words, it offers a less frustrating struggle. This objective can be accomplished by:

1. making the content manageable
2. streamlining the learning process.

The first of these items can be addressed by focusing on the essence of the Pareto Principle or the 80/20 rule. If the most important items (the 80) are contained in a small segment of the available information (the 20), classroom activities should have a clear direction. Less important matters can be saved for independent reading or future self-directed learning.

The second item, a more efficient learning process, can be employed by maintaining a set pattern in the classroom. It can start with assignments being placed on a certain section of the board at the beginning of class. Another opportunity includes standardized procedures for covering course material (i.e., lecture followed by a student question and answer session, case study or other self-learning mechanism) (Svinicki, 1990-1991).

Internal Environment

Fortunately, the attitude towards addressing such issues at my institution is virtually free of "change barriers." Our faculty has reviewed matters related to the AECC recommendations and incorporated key aspects in two area planning documents:

1. *Accounting Faculty Area Program Review* - A self-study of the strengths, weaknesses, threats and opportunities of our program. This effort was completed in the Spring 1993 semester and incorporated viewpoints from graduates, current students, administrators, regional and national bodies. The document is currently being reviewed by our Academic Administration.

2. *Accounting Faculty Area Plan of Operation* - Step by step detail of our efforts over the next three years in support of items noted in the Program Review.

Our area's approach to educational reform (e.g., AECC initiatives) can be classified as more measured than revolutionary. I believe our philosophy dovetails more with a view that individuals in the area seek to reform that within their immediate span of control. In other words, the classes they teach every day. Such an approach will enable us to promote longer lasting reform than that which would result from a more drastic model (Cross, 1989).

Reflection #2: In many ways, I find my classroom methodology has evolved towards increased participative learning. This has resulted not from an extensive amount of outside reading on the benefits of this model, but rather from a sense of what students find rewarding in our interactions. This seemingly seat of the pants template has deeper roots. Smith and Schwartz summarize the process as follows using Donald Schon's

The Reflective Practitioner: How Professionals Think in Action:

> Professionals are constantly making judgments and decisions but cannot state the rules or theories upon which they are based. Schon describes this practical knowledge as "know-in-action." Professionals come to know in action through a process Schon calls "reflection-in-action," where their thinking in the midst of action reshapes what they do while they are doing it (Schwartz & Smith, 1990).

Even though my class topics are based upon a common body of knowledge, I learn each semester that participative strategies other than merely covering the material work well. For example, a review of my prior course outlines evidences that at least 20% of any class grade has been assigned to student based learning. A variety of learning vehicles have been employed in this regard. They include written projects, group work, individual and group presentations, and outside activities. However, my experiences to date are part of a journey. I have not yet reached the destination.

Journal Summaries:
July 10-14, 1993
Cape Cod is great for reflecting and planning at this time of year! As I sit near our motel reading Hammer and Champy's Reengineering the Corporation, I am struck by my own goals and objectives for the upcoming semester. I want my approach in the coming session to be unique. My motivation will have some basis in the ideas I have read in this book, but will also be influenced by work with faculty colleagues on our Accounting Program Review. Ideas that will be an integral part of the course outline I envision:

1. The "team" approach to management of tasks.
2. The view of issues involved in decisions as "processes" rather than small pieces of a puzzle
3. "Active" learning by students.
4. A continual two way dialogue in the classroom.

It has been over five years since I taught Cost Accounting. It is hard to believe all that has changed. Some transformations:

1. The expanse of technology in the work place and the classroom.
2. Changes in management philosophy including: Total Quality Management and Reengineering.
3. The restructuring of the corporate "white collar" population.
4. The replacement of the specialist with the generalists in management ranks.
5. The increasing importance assigned to communications skills.
6. The accountant's multi-dimensional role as number analyzer, management consultant, and information manager.

An indication of my commitment to change and new ideas for the coming semester will be evidenced by my acquisition of new word processing software! *WORDSTAR* has served me well, but it is time to move ahead. My new ways will start with a fresh approach to preparing my classroom communications. I will purchase Microsoft *WORD* by the end of July and be actively involved in learning its capabilities by early August.

Another resolve I must make is to keep my customer, the student, at the top of my considerations for this coming semester. I will pattern my interaction after my experience in the Spring 1992 semester. I recall a most positive student/professor interaction that term. A good deal of that can be attributed to chemistry, but the remainder benefited from my approach to the learning process. I firmly resolved that the subject matter would not get in the way of student learning. As a result, I was less concerned with covering material and more concerned with "maximizing the student learning experience" via attention to a continuous dialogue. I will keep this model in mind for September.

Reflection #3: Viewing the educational process through a business axiom (e.g., Reengineering or Total Quality Management) is objectionable to some constituencies. Perhaps this philosophy is not comprehensive enough for the operation of education. The term customer can be an uncomfortable description of a student. However, if we put terms aside, a more substantial argument can be made in support of this approach. For example, the advantage of working at the crossing points of disciplines (management theory combined with the rigors of psychological and scientific thought) has helped organizational theory to become a valuable tool in both domains.

Indeed, the factors that drive success in any organization are quite similar. A comparison of the American Association for Higher Education's "Implementing Successful Assessment" criteria with those listed in Hewlett--Packard's "Quest for Total Quality" documents this contention (Seymour, 1993). Excerpts from the two documents are offered in Appendix B.

August 23-31, 1993
So many new ideas have come to me in the last month! I believe my course outline will be at least four pages, maybe more. Not that length is my objective. Rather, I feel a thorough description of expectations and detailed definition of assignments are important reference points for students as the months progress. For myself, they serve as a reminder of design methods and plans once the busy semester begins.

I believe the "student directed" learning segments of the course will be at least 35% of the final grade. At this time, they consist of:

Activity	Percentage of Final Grade
Computer Project	15
Class Participation/Activities	20

The *Computer Project* will involve a business related problem that requires student input into a spreadsheet application. This software will be organized in a template format so that lack of requisite knowledge will not impair the number generation segment of the learning experience. Students will then be responsible for analyzing the data generated and presenting it in a meaningful, written report to the business manager of the scenario.

I feel this endeavor can be beneficial in a number of ways. First, students should obtain a better idea of the value added by spreadsheet applications. Their prior experience likely has been confined to an Introductory Computer course that explored such applications only briefly. Second, interpreting a computer generated analysis in a written assessment is the essence of management communications. Professionals in the field struggle with such matters on a daily basis. Hence, student experience here will aid writing and critical thinking skills. Lastly, this endeavor should unearth some independent problem solving talents in each student. My assistance on this project will be minimal. I will offer direction in a most general way, but the main resolution will be left to the individual. While this may seem neglectful, I believe the struggle will provide students a unique opportunity to deal with less structured circumstances. Such scenarios, of course, are an inherent part of the world they will encounter after graduation.

*Class Activities (10%)*will consist of student interactions with professionals, professional organizations and issues likely to influence the workplace of the future. The primary forum will be our Accounting Club, a campus organization charged with exploring and discussing pertinent topics in a series of meetings throughout the semester. Other resources include the Institute of Management Accountants and the Connecticut Society of CPAs. Also, campus academic convocations and developmental seminars will serve as possibilities. I will welcome student ideas on other sources that can be beneficial to this endeavor.

Class Participation (10%) will have its base in each class session. My philosophy here will be: "those that attend will participate and hence receive a corresponding recognition in their fulfillment of this requirement." However, I must create opportunities for students to participate in this module if this statement of purpose is to be meaningful to class members. I hope small group work and other dialoguing mechanisms can serve as useful achievement measures here.

These "student directed" learning segments comprise the highest proportion of the total grade in any class I have taught. It seems my commitment to "reengineering" is driven by:

1. A personal need to innovate.
2. Feedback from professional business associates on the needs of graduates.
3. My own interpretation of relevant AECC proposals.

Also, I wish I could learn my new word processing software more quickly!!!

September 1, 1993
My wife, Sandy, has just finished her umpteenth review of the course outline final draft. Among other things, she mentions her difficulty in comprehending my schedule of class topic coverage throughout the semester. Sandy remarks, "The software presents the subjects in a most pleasing manner, but if I were a student viewing it for the first time, I would be confused over the meaning of the third column." A review of her point confirms the lack of clarity. I resolve to make a point of this when reviewing the outline in the first class session.

September 8, 1993
The first day of class has arrived!! Most of today's session was devoted to a review of the course outline. Sandy's input was indeed valuable. Students were confused by the grid and I believe my revised interpretation was useful in resolving their concerns. This reminds me of the continual need to solicit counsel as I strive to innovate. What is clear to me may not be to the very important audience, my students.

September 10, 1993
Student reflection on the class outline surfaced some questions. Of primary concern was an alternative to the defined class activities. Many of the students work during the school week and cannot attend Accounting Club meetings scheduled on a day we do not have class. I asked for their ideas and received several responses favoring outside research on current issues likely to affect the future working environment. I agreed to this and added that their findings could be shared in either a written (2-3 word processed pages) or an oral report (5-7 minutes in length) to the class. Such an effort will count 2 points towards this requirement, an amount equal to an off campus activity.

Reflection #4: Student outside learning opportunities were quite extensive during the semester. Class members attended a variety of events in fulfillment of the "Class Activities" segment of the course. A partial list:

1. The Connecticut Society of CPAs "Day *in Business*" program an endeavor in which students accompany accounting professionals in their work assignments for an entire day.
2. A Women's Studies sponsored exposition on *"How to be a Successful Female in Today's Corporate Environment."* A presentation by two female executives summarizing their experiences and insights into the corporate culture.
3. *"The North American Free Trade Agreement:* International Perspectives" - An academic forum addressing the meaning of this agreement from the perspective of an International Accounting expert.
4. *"Future Prospects for the Emerging Russian Economy "* A discussion of the "state" of the former Soviet Union by a noted economist.
5. *"Resume Writing Seminar"* - An exploration of this topic conducted by our Career Services office featuring insights from local business professionals.
6. *"CD ROM and Other Technological Applications for the CPA"* An examination of the latest technology supporting the public accounting professional.

Also, on October 13, 1993, our Career Planning and Placement Office sponsored a *Career Day*. The event consisted of a panel discussion followed by several break-out and information sessions. The class attended the event in lieu of that day's scheduled class. Many students composed papers on the day which:

1. Summarized their experience for the day and
2. Detailed how these sessions would help them plan for future interviews.

Both activities counted towards the "Class Activities" requirement.

October 20, 1993
Today's class experience was a real treasure. We were discussing the concept of"Flexible Budgeting." It is a mechanism for communicating the variation between actual and budgeted results to operating managers. The class seemed to be confused on the process so we worked out a problem together. They seemed a little more aware of the relationships after this, but I wanted to be certain. I split the class into six groups of four or five students each and had them work together to answer the question, "How would you present this information to the Division Vice President?" I told them we would role play their recommendations in the next class.

The students were enthused by the new approach and spent better than one half hour of class time in group discussions. Some groups stayed together longer which was particularly intriguing since the class period had officially ended at the thirty minute mark. I believe our next session holds great promise!!!

October 22, 1993
The role playing today was an adventure!! A most successful one!

I began class by reiterating the roles to be played (student group leaders, Divisional Controller, myself, Divisional Vice President or his/her superior) and reminded them of the objective of the exercise (i.e., To effectively communicate the difference between actual and budgeted results using the mechanism we discussed in the last class as a base).

The groups were reluctant to begin the exercise. I decided to volunteer a student who was assertive and generally well respected by the class. Our dialogue began and, although, his interpretation was less than what I expected, I did not interrupt his thoughts. When he finished, I jokingly admonished him and threw him out of my office. This seemed to loosen up the crowd and another student volunteered.

This next interaction went somewhat better and after it concluded, I asked the class for their feedback on the dialogue thus far. Some positive comments were offered and then another volunteer approached the problem very creatively. Several other students followed. I carefully avoided offering my opinions during all of this.

When the last volunteer finished, I solicited feedback on the entire exercise. Several students asked, "What is the right answer?" I responded, "I don't know; there is not one." The class response, "What do you mean? There must be an answer!!" Our dialogue continued, and we discussed several possible options for responding.

Highlights of this segment were:

1. The chemistry between the two parties is paramount to successful communication.
2. The numbers serve as a basis for communicating the results, but do not dictate how this should be accomplished.
3. The Controller in the role of communicator is responsible for determining what communication vehicle(s) will make the numbers talk to his or her audience. In short, the communicator must know his or her audience and its needs. Successful communication will result over time by employing a method of trial and error.

November 16, 1993
I am confronted with the challenge of bringing the computer project to fruition. Since late October, I have been attempting to encourage students to submit a draft of their work for my initial review. I have reminded the class that my review is just that. No grade will be recorded. I will offer feedback that can direct the revision process. To date, I have only received a few submissions. I will have to bring the issue to the forefront at our next class session.

November 18, 1993
I learned several things today. First, my relationship with the class is an honest one. I asked them directly, "Why aren't you submitting the computer projects?" No answers were forthcoming, but facial expressions clearly answered the question. They were afraid!! The answers to my next question confirmed this suspicion. I was pleased they admitted this, even if the facts had to be extracted from them.

Second, I relearned the value of letting the class decide how to solve a dilemma. Some members said that a number of them should meet to discuss strategy on the project. I agreed and decided to dedicate the remainder of class to this purpose. With about five minutes remaining in the session, I asked for feedback. The students were genuinely appreciative for the opportunity and felt that a great deal of progress had been made.

Lastly, I learned the importance of continually clarifying course requirements and confirming class understanding of them. I had promoted the computer project as an effort to encourage critical thinking. Students need only develop a rationale and support it. What I failed to realize was that I had not offered a foundation upon which they could build a structure for such thought. In other words, the minimal help notion fostered in my August 23-31, 1993, journal summaries was followed to a fault!!

I hope today's small group work offered enough support for the project to reach a successful conclusion.

Reflection #5: As I ponder my successes and failures with these student directed learning vehicles (i.e., role playing and computer project) through outside readings, some relevant items surface. Learning in this type of atmosphere flourishes when students want to take risks. The instructor's challenge is to create such an environment. This is nurtured by an evolving relationship of trust with students. Several traits of instructors who champion this notion:

1. *They model how to take risks.* New developments in the field may be introduced for which there are no correct answers. This procedure helps as it indicates the rationale for formulating ideas.
2. *They exude organization and competence.* Students who believe the instructor is on target (i.e., s/he knows the class's direction for the semester) will likely embrace risk taking less reluctantly.
3. *They minimize the pain of making an error.* Everything assigned does not have to be graded. In-class activities can be viewed as preparations for evaluation. Group activities which foster new ideas encourage this goal as well.
4. *They provide risk taking opportunities.* Students learn to think on their own. Even though they stray from the correct way this detour can be useful (Svincki, 1989).

Also, motivational considerations are critical to success. Course outlines and supporting methodology should address such matters. However, these tools should also consider expected student outcomes. A useful model incorporating both issues is offered by Main (pp. 37-41, 1993). He incorporates the Keller's ACRS (Attention, Relevance, Confidence and Satisfaction) motivational model with the Military Instructional Design Model (Analysis, Design, Development, Implementation and Control) for course outline development. A resultant matrix offers a mechanism for gauging both factors in a planned activity.

My review of these resources prior to the design of my next course will be most useful.

APPENDIX A - Accounting Education Change Commission (AECC) Issues and Position Statements, Tempe, Arizona

Issues Statements

1. AECC Urges Priority for Teaching in Higher Education, August, 1990.
2. AECC Urges Decoupling of Academic Studies and Professional Academic Studies and Professional Accounting Examination Preparation, July, 1991.
3. The Importance of Two-Year Colleges for Accounting Education, August, 1992.
4. Improving the Early Employment Experience of Accountants, April, 1993.
5. Evaluating and Rewarding Effective Teaching, April, 1993.

Position Statements

1. Objectives of Education for Accountants, September, 1990.
2. The First Course in Accounting, June, 1992.

(AECC) Issues and Position Statements, Tempe, Arizona

Issues Statements

1. AECC Urges Priority for Teaching in Higher Education, August, 1990.
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Position Statements

1. Objectives of Education for Accountants, September, 1990.
2. The First Course in Accounting, June, 1992.

APPENDIX B - Education and Business Total Quality Management Models, Educational Record, Spring 1993:11

American Association for Higher Education's "Implementing~ Successful Assessment"

1. Who are our students, and why do they come here?
2. What should a graduate be like?
3. How do students change - and why?
4. Who do students talk about their our learning?
5. Is there a better way to organize the curriculum?
6. How could we do better?

Hewlett-Packard's "Quest for Total Quality"

1. Who are my customers?
2. What do they need?
3. What is my product or service?
4. Does my product or service exceed their expectations?
5. What is my process for providing the need?
6. What corrective action is needed to improve the process?

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REALITY 401:

AN INTENSE PRESERVICE FIELD BASED PROGRAM

for

MIDDLE GRADES EDUCATION

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Abstract

Given the reality of the broader mission of schools, it becomes obvious that the knowledge and skills which teachers must possess have changed. So, a quality middle grades undergraduate program was designed to be responsive to the needs of the people and organizations of South Georgia. Furthermore, the program provides a collaborative training base with public school faculties. This program involves university faculty, preservice teachers and public school staffs, students and parents. Reality 401, a senior year partnership, is a joint effort of the Middle Grades Education (MGE) faculty, public school faculties, and MGE seniors. The focus of this paper will be a discussion of the development, implementation and evaluation of the field based program, Reality 401.

Background

Many administrators find that new teachers trained in current pedagogy adopt the lecture, workbook teaching methods within a few months of beginning their careers. New teachers apparently leave college not owning the new pedagogy recommended for middle graders, or it may be that first year teachers face a host of problems that include disillusionment and frustration (Calliari, 1990). Their energy is therefore diverted away from instruction. The comment "I had no idea that teaching was so demanding" is heard time and again. Because of this dilemma, the Middle Grades Education (MGE) faculty at Valdosta State decided to revise the undergraduate program to address the problem.

The Departmental plan is to immerse seniors in the middle school philosophy and practices. They are empowered to take charge of their education and development as a middle school teacher. A significant amount of the students' education is in the field with master teachers (mentors) who have volunteered to work with preservice teachers. Each student is assigned a mentor and a team with which to work. In addition, each student has a MGE faculty supervisor who observes him or her in the field a minimum of three times during the quarter. All data collected from the field experience is kept in the student's portfolio. In doing this, the MGE faculty is "practicing what we preach" by implementing an alternative assessment for the evaluation of students.

The pre-1992 program had field experience associated with the method courses. For example, two weeks of field experience were connected with each block of classes: language arts and social studies methods and math and science methods. Students completed four weeks of field experience plus September field experience before student teaching. The 10 week student teaching experience involved students getting to know the cooperating teacher, students, and school environment. They gradually got the teaching responsibility for the full day. Two weeks of solo teaching was completed during this time. The faculty believed that the students needed more time in the classroom so preservice teachers could gain the confidence and ownership of middle grades pedagogy needed to be successful.

Development

A revised senior year program was developed focusing on a field based plan. The MGE field experience is defined as the groundwork for student teaching. It is the period of time in the preservice teachers' program when the potential educator begins to close the gap between theory and practice. It is a period of introduction to the middle school environment and a period of guided practice working with middle grades students and faculty. The field experience involves three phases: observation, participation, and teaching.

Reality 401 consisted of the first quarter; three courses blocked together and intense field experiences would be involved. The second quarter of senior year involved three more classes and intense field experiences. Student teaching would be completed third quarter. The plan was presented to the Dean of Education. He liked the idea and encouraged the faculty to proceed. The principal of a local middle school was contacted to see if he would be interested in the program. He agreed and permission of the superintendent was gained.

In the fall of 1992 the first senior year program began. Both instruction and field experience were conducted at a local middle school. Twelve preservice teachers were assigned to mentors for the entire school year. MGE faculty taught the college classes at the school for three hours a day. Three hours a day the preservice teachers were in public school classrooms working with mentors and students.

The major problem encountered fall quarter concerned scheduling. Some preservice teachers missed team planning time because of college courses and some missed working with students for the same reason. So, Winter Quarter of 1993, the seniors worked in the classroom Monday, Tuesday, Wednesday and attended college classes Thursday and Friday. Communication among MGE faculty and mentors was found to be important to the success of the program. Spring Quarter of 1993, these twelve students completed their student teaching. The vice principal of the school commented "these students are more confident and knowledgeable about the school environment than students in the past."

Now, the middle grades major component of the program has 105 quarter hours of course work with approximately 470 clock hours of field experience besides the culminating 10 week student teaching component. For example field experience before senior year includes:

PSY 310 - Educational Psychology	20 hours
SPE 360 - Exceptional Children	20 hours
MGE 301 - Nature & Needs of Middle Level Student	20 hours
September field experience	2 weeks all day

Senior year includes a minimum of 20 field days for each of the two quarters. Preservice teachers follow the same schedule as a classroom teacher. For example preservice teachers report at 8 a.m. and leave at 4:30 p.m. just as the regular faculty.

Preservice teachers also have two days during which they become middle graders for a day. The best schedule for this activity is for preservice teachers to be a student for a day in their assigned school. They are assigned to a student and go through the day as that student's side kick. At the end of the quarter, they are a student for a day in another middle school. The same procedure is followed. Preservice teachers write thank you letters to their side kick. Several special relationships have started because of this routine. Preservice teachers learn to respect and appreciate the middle graders after walking in their shoes for a day. This experience is valuable for all.

After the first year, a field experience handbook was developed to improve communication. It includes the following sections: overview and responsibilities of all involved, mentor sections, and preservice teachers' section. The mentor section contains assessment forms to be used during the quarter and suggestions for working with the preservice teacher. The preservice teachers' section contains examples of the lesson plan format to be used, log and sign in sheet to be completed. See **Appendix** 1 for an example of the mid-quarter report that is completed by the mentor concerning the preservice teacher's professionalism.

The scheduled established for the second year of this program was preservice teachers attended block courses Monday and Tuesday then worked in the schools Wednesday, Thursday, and Friday. Both mentors and preservice teachers stated that this scheduled was awkward. One reason was that the preservice teachers did not see the beginning of units started Monday. Mentors had to spent time bringing preservice teachers up to speed. Friday for many classes is test day and down time. Preservice teachers believed they needed more experience in beginning the week's activities. Therefore, Winter Quarter the schedule was changed to preservice teachers working in the schools Monday, Tuesday, Wednesday and attending senior block classes Thursday and Friday. One week each quarter students are in the schools the full week and are responsible for planning, teaching, and evaluating two class periods. The second quarter they are in the schools for a full week and are responsible for planning, teaching, and evaluating three class periods. Then they are ready for ten weeks of student teaching. We expect these students to be responsible for teaching all periods for eight weeks with 2 weeks of solo teaching without the teacher in the room.

Evaluation of the program

Several instruments used for evaluation are mentors reports, mentor interviews, preservice teachers' interviews, self report of confidence concerning classroom management, supervisors' evaluations, preservice teachers' lesson plans, assessment of mentor teams by preservice teachers, and, in the future, senior portfolios. During Fall Quarter of 1993, a graduate assistant interviewed mentors and preservice teachers. He asked what they liked about the program and how it could be improved. A sample of positive and negative responses from both mentors and preservice teachers is found in **Appendix** 2.

School Sites

Ten sites are used for senior year experience. These schools were selected as the result of their interest in working with the program, of their having strong mentors, and of their location. Two schools, Lowndes Middle School and Lanier Middle School, have gone out of their way to work with the program. Mentors who have worked with the program for over a year have asked for training and more information in the handbook. They also asked to be evaluated concerning their mentoring attributes. These mentors and teams received no compensation for this partnership. A certificate of appreciation is given to each lead mentor each quarter.

Summary

The motto of the department is "Partners Transforming Education For Tomorrow." The middle school philosophy is active learning with the student as the focal point of the education process. Thus, the program is field-based providing the students with a hands-on learning experience. Knowledge and skills are introduced, modeled, and practiced in all MGE courses. Students are required to apply their knowledge and skills while working with middle grades students. A focus of the preparation program is that students are trained to be team members. Cooperative planning within the department and with other departments is necessary for providing the students with a comprehensive view of education. Each senior block has a faculty member serving as team leader similar to teams in the middle school. There are three senior block options students can select to enter.

The Middle Grades Education Department of Valdosta State University provides an exciting innovative preservice program for its students. Dean F. D. Toth, supporting departments, local school systems, and the middle grades faculty work together to meet the challenge of providing excellent teachers for the future. The Middle Grades Education Department is meeting needs of preservice teachers, school systems, and communities with a program based upon the concept of partners transforming education for tomorrow.

APPENDIX 1

MIDDLE GRADES EDUCATION SENIOR FIELD BASE PROGRAM

Mid-Quarter Professionalism Report

Preservice Teacher's Name ______________________________ Date____________________

Mentor's Name____

School____

Rate the student by checking the space most indicative of the student's professional behavior. You may comment on any rating that you have assigned. Some items need the team's input. Please be as accurate as possible in your assessment. Discuss report with preservice teacher before signing and dating. Have preservice teacher sign.

Attributes The student:	Always	Sometimes	Seldom	Never
reports to school on time				
stays the assigned time				
has a sense of responsibility for all teaching assignments				
is prepared for assignments				
has a positive work ethic				
is enthusiastic				
dresses professionally				
works effectively as member of a teaching team both in the classroom and in the school				
models proper behavior and grammar				
appears confident				
is assertive				
has classroom management knowledge				
gets involved with students professionally				
respects students				

Comments:

Preservice Teacher's Signature_____________________________

Mentor's Signature____

Date____________________

APPENDIX 2

Positive	Negative
More time in school based education means better prepared teachers.	Loss of students on Monday and Tuesdays causes continuity problems.
The time spent "student teaching" is devoted to teaching and not learning the rules, names, etc.	More guidance/training for mentor needed.
	Students can become overloaded with work (college and middle school).
They learn the real fun things like dress up days, bomb threats and parent conferences.	Want to volunteer to be mentor.
I grew from the experience as I learned a lot of new things that I didn't have access to before.	Can be a lot of extra work.
	It is a lot of work.
This program will weed out those people that aren't teaching material.	Fear of being assigned to a "bad" teacher and picking up those bad habits.
Ability to see other teachers in action and see the difference ways of dealing with situations.	Teacher won't share lesson plans.
Liked coming back to VSU to ask questions about problem areas or concerns.	Difficulty in complying with college requirements in the schools. Feel this can be an imposition on the teacher.
Being guided through situations by a person with experience. Not something you can learn in a college classroom.	Ownership problem (won't let the student do anything).
Feel more competent and confident.	Not everything the school does, works.

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PROCESS - MODELS

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PEDAGOGICAL IMPLICATIONS OF A MERITOCRATIC ANALYSIS OF BURTON CLARK'S COOLING-OUT PROCESS

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Abstract
This paper explores practical pedagogical implications for community college faculty of a study that measured the cooling-out process using a meritocratic definition of fairness to determine if this process denied access to the transfer degree to students from particular segments of society. Analysis of this study's results supports the meritocratic supposition that access to the transfer degree appears to be unrelated to the socio-economic status, race, and gender of students in the cooling-out process. The finding that older students were more likely to be cooled out than younger students, however, lends support to some key critical theory tenets and calls into question whether older students in the cooling-out process are being unfairly denied access to the transfer degree.

Introduction

The community college movement has possessed from its beginnings in Joliet, Illinois, "great potential for facilitating universal access to higher education" (Rudolph, 1987, p. 284). Such access is often tied to the "general principle of free public education as the right and need of all youth who can profit by it" (Bogue, 1950, p. 9) and as "a partial realization of the democratic ideal that secondary school and college education should be available to everyone" (Brick, 1964, p. 5). The open-door admission policy is a cornerstone upon which the community college's commitment to access has been built. By way of this policy, students who year after year are less likely to be the traditional young, white, middle class male can gain admission into community colleges where they have the opportunity to improve their skills and possibly earn postsecondary degrees.

Some critics of community colleges, typically critical theorists, however, see the community college as being less a conduit for access and more a barrier that society has constructed to check the ambition of the nontraditional student. They argue that a student's demographic makeup plays a significant role in determining if a student will be "cooled out" during his or her tenure at a community college, if a student will have his or her opportunity for social advancement through educational attainment impeded by factors extraneous to academic ability.

Theoretical Background

The cooling-out process has received considerable attention within the higher education community since it was first defined by Burton Clark (1960a, 1960b, 1980) as a covert institutional process designed to encourage community college students whose academic aspirations exceed their academic abilities to move out of the transfer degree program and into a terminal degree program. Much of this attention has focused on whether this process is fair.

Clark purports that academic ability and accumulative record determine who will and who will not be cooled out. As such, the cooling-out process is built on meritocratic principles and can be judged against a meritocratic definition of fairness. The cooling-out process is fair according to meritocratic principles if factors extraneous to academic ability do not significantly predict which students are cooled out (Hearn, 1984; Rehberg & Rosenthal, 1978). If the cooling-out process is fair, community colleges arguably have not denied cooled-out students access to the transfer degree; community colleges have upheld their responsibility to provide cooled-out students educational opportunity equal to that provided students earning the transfer degree since equal educational opportunity exists as long as the distribution of educational resources is proportional to the students' relative academic abilities (Brubacher, 1982; Feinberg, 1975; Giarelli & Webb, 1980; Herrnstein, 1971).

Critical theorists, however, see the cooling-out process as less than equitable precisely because it aspires to meritocratic principles (Bowles & Gintis, 1976; Brint & Karabel, 1989a; Brint & Karabel, 1989b; Karabel, 1972; London, 1978; Zwerling, 1976). They take issue with a core assumption of meritocracy: the notion of valid measures of student academic ability (Archbald & Newman, 1988; Bowles, 1971; Carnoy, 1974; Karabel, 1972; Medina & Neill, 1988; Wilkerson, 1982). Because they are defined in terms of which students of social privilege tend to excel, these measures can be valid assessments of academic ability for only such students; these measures cannot be valid for all other students (Archbald & Newman, 1988; Bowles, 1971; Carnoy, 1974; Karabel, 1972; Medina & Neill, 1988; Wilkerson, 1982). Defining relative social privilege in terms of socio-economic status (SES), race, and gender (McClelland, 1990) then leads critical theorists to reject the fairness of the cooling-out process for working-class, African-American, and female students (Bowles & Gintis, 1976; Brint & Karabel, 1989a; Brint & Karabel, 1989b; Karabel, 1972; London, 1978; Zwerling, 1976). Critical theorists hold that the SES, race, and gender of such students are significantly related both to their being in the cooling-out process and to the recommendations and evaluations they receive while within this process.

Bourdieu and Passeron (1977) explained the inherent unfairness within meritocratic measures of academic ability in terms of cultural capital--the relative value of any group's linguistic and social norms which increases the closer they are to the linguistic and social norms most valued by school personnel. In that community colleges place the most value upon the cultural capital of "the dominant culture" (Bourdieu, 1973, p. 80), all evaluations of academic ability during the cooling-out process from pre-entrance standardized examinations to guidance counselor interviews to professor evaluations are determined by how well students think and speak and write and act like middle-class white males. In this light, the lower a student's cultural capital, the more likely he or she will experience the cooling-out process and the more likely he or she ultimately will be cooled out. Clearly then, critical theorists anticipate that factors like SES, race, and gender are not extraneous from, but are central to measuring academic ability. The cooling-out process from this point of view denies an equitable distribution of educational opportunity for students of less than social privilege, and, thereby, it denies them access to the transfer degree.

Drawing upon Bourdieu's social reproduction theory, McClelland (1990) argued that students having "similar experiences will not respond to them in the same way . . . " (p. 104). In this case the experience in question is students receiving signals from community colleges during the cooling-out process that the transfer degree is beyond their academic grasp and a terminal program should be pursued. Once receiving any such signals, students of less than social privilege are more likely to lower their aspirations than are their more privileged peers. The latter group is more likely "to be surrounded by images of success, to be able to see the connection between effort and reward, and to believe that they are capable of achieving ambitious goals" (McClelland, 1990, p. 104). Thus, critical theorists not only see measures of academic ability as being biased against certain students within the cooling-out process, but they also see these same students as being ill-equipped to maintain their resolve for the transfer degree. They, therefore, charge that the cooling-out process is no more than another mechanism by which society checks the ambitions of students whose "cultural aspirations clash head on with the realities of the class system" (Karabel, 1972, p. 539). These students are those whose aspirations have been nurtured by the Franklinesque dream of success but whose upward mobility is not easily accommodated within a stratified society; they are those "who have made the mistake of aspiring too high" (Zwerling, 1976, p. 81).

Method and Data Sources

To determine if the cooling-out process denies access to the transfer degree to students from particular segments of society, the following null hypothesis was tested: SES, race, and gender taken independently and in combination are not significantly related to students being cooled out when two confounding variables (academic ability and age) are controlled.

This study drew its sample from students at a Florida Community College who had earned either an Associate of Science degree or an Associate of Arts degree between winter term 1984 and fall term 1991. It was limited to determining the relative fairness of the cooling-out process after students had been placed into one or more college preparatory courses based upon their pre-entrance standardized examination results. This limitation was necessary because these examinations were the only uniform measures of academic ability available. Academic ability needed to be controlled during the study to eliminate SES, race, and gender taken independently and in combination as significant predictors of students being cooled out because these students had less measured academic ability at the outset.

The sampling procedure was stratified according to race to ensure that a meaningful number of African-American students would be included. All 103 African-American graduates who were determined to have been exposed to the initial stage of the cooling-out process were selected. These 103 African-American graduates represented 23.6% of the total 437 African-American graduate population. Also included were 96 white graduates who were

determined to have been exposed to the initial stage of the cooling-out process. These 96 white graduates represented 1.2% of the total 8,118 white graduate population and 10.7% of the 900 white graduates who were randomly selected from the total white graduate population. For both races, the sampled graduates were exposed to the initial stage of the cooling-out process if during registration they identified themselves as intending to earn an Associate of Arts degree, but
then were subsequently placed into one or more college preparatory courses due to their scores on a pre-entrance standardized examination.

SES was defined in this study in terms of the Pell Grant Index Number (PGIN) for all students requesting financial aid; students not requesting financial aid were assigned a PGIN of 7360 which was one integer higher than the highest PGIN of students requesting financial aid. Race was limited to the categories African American or white since the potential sample for all other racial groups was too small to yield meaningful results. Academic ability was defined in terms of a composite index of reading and mathematics scores on the American College Test, Scholastic Aptitude Test, or Computerized Placement Test. Age was identified at the time of first enrollment at the specified community college. Students had been cooled out if after enrolling in the transfer degree program and being placed into one or more college preparatory courses due to low pre-entrance standardized examination scores, they graduated with a terminal degree--the Associate of Science degree. Students had not been cooled out if after enrolling in the transfer degree program and being placed into one or more college preparatory courses due to low pre-entrance standardized examination scores, they graduated with a transfer degree--the Associate of Arts degree.

Results

A logistic regression model was used to test the null hypothesis. Analyses were run with the full logistic regression model, first examining main effects of all predictor and moderator variables as well as interactions between all of these variables. Predictor variables included SES, race, and gender; moderator variables included academic ability and age. A significant relationship between age and being cooled out was determined through these analyses: $x^2 = 10.93$, $p < .001$. This relationship between the probability of being cooled out and the age of students reveals a positive slope indicating that in this study as age increased the probability of students being cooled out increased.

Pedagogical Implications for Community Colleges

The inclusion of age as a moderator variable in this study's analyses had an unintended effect. This study marks the first time in the community college literature that age has been associated with students being cooled out, and it calls into question whether older students in the cooling-out process are being provided fair access to the transfer degree.

By means of this analysis of Burton Clark's cooling-out process as well as my seven years of experience within the community college as an English professor and now as an Institutional Researcher and Planner, I see the full realization of the democratic ideal upon which community colleges are built to be tied to the concept of cultural capital. I think of the dozens of sections of freshman and sophomore English I have taught and wonder what the linguistic and social norms are I value, what the linguistic and social norms are I undervalue due to my having been reared in an all-white small town in southern Indiana, due to my background at a small undergraduate college, due to my traditional family orientation. Most of us--on some level--value in others most what we value in ourselves.

Many of us--on some level--value the pedagogical approaches that were valuable to us as students; many professors teach as they were taught. Many of us began our undergraduate educations while still in our late teens and sat in classrooms filled mostly by students our same ages. Do the pedagogical approaches we use in the classroom lend themselves better to linguistic and social norms of one subculture over another? To a younger subculture? Perhaps to those with a learning style better suited to lectures than to group discussion and tactile experiences? To . . . ? The possibilities go on and on.

A heightened awareness of cultural capital and its interface with the mission of the community college and the mission we establish in our classrooms is needed. This interface can be considered in the light of Burton Clark's cooling-out process and the possibility that older students in the cooling-out process are not being provided fair access to the transfer degree.

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INSTITUTIONAL CHANGE AS A RENEWAL PROCESS: THE NHMCCD MODEL

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Abstract

When the NHMCCD found itself in the late eighties with a sound financial footing, a multicampus structure, and generally adequate physical facilities, it was time for a new look at instructional methods, student services, community outreach, and technological support. Therefore, new instructional delivery systems, including collaborative teaching, distance learning, an honors program, and multicultural courses have appeared within the District to meet the needs of the diverse communities within the service area. Along with these innovations in instruction have come the necessary changes in student services and technology, the costs of which have been met by a combination of tax and tuition increases, grants (including Title III), the establishment of a foundation, and a record of continued growth enrollment. The internal renewal has been painful for some faculty, but the majority are agreed that the changes auger well for its ability to provide the highest possible quality of services to students.

Introduction

Now a four-college district, North Harris Montgomery Community College District (NHMCCD), comprised of six independent school districts, is a publicly-supported, two-year, comprehensive community college district with open admission, offering post-secondary educational opportunities to approximately 20,000 credit and 30,000 non-credit students annually in the northern metropolitan Houston area. Today, twenty years after the doors were opened, NHMCCD offers over 59 programs of study in day, evening, and weekend classes in traditional as well as independent study, televised, and fast track formats. Income is derived from four basic sources: state funding (54.9%), federal funding (.1%), local taxes (31.2%), student tuition (12.2%). and other local sources (1.6%). Combined, these sources of income enable the District to provide high-quality instruction at a relatively low cost.

History

Historically, the colleges in the District have attempted to provide an educational environment supportive of the community's needs, but the immediate community surrounding North Harris College (NHC), for about twelve years the only campus, changed dramatically during the 1980's. Ten years ago, the area was an affluent, predominantly white suburb five miles from Houston's Intercontinental Airport and twenty miles north of Houston's inner city. An economic crisis, precipitated by the drastic drop in oil prices in the early '80s, resulted in marked demographic changes in the area. During the middle and late '80s, many lower-income families, including large numbers of ethnic minorities, moved into the area and rented or purchased homes in neighborhoods which had been previously solidly middle-income. The Aldine ISD, where NHC is located physically, is now approximately one-third African-American, one-third Latino, and one-third white. The estimated 1990 population of the service area was 3,031,747, with all reports from local government and school districts indicating that demographics continue to change. Furthermore, among residents of the service area only 68 percent of those 25 years or older have completed high school compared to 82 percent just eight years ago. The high school dropout rate also continues to rise, increasing from 19 percent in 1985 to 22 percent in 1992.

Just as the economic crisis struck Houston, the original single-campus college was in the process of splitting into a multicampus district. District expansion and a plummeting tax base were paralleled by a student body forced back into the college setting for retraining by the collapse of the oil industry. The District found itself in the late '80s with a basically sound financial footing, despite the vagaries of the economy, with a multicampus structure, and generally with adequate physical facilities, but with a diverse, rapidly changing student population, and with a long-established faculty (average age, 46.5; average tenure specifically at NHC, ten years plus) aware of but sometimes uncomfortable with the institutional changes necessary.

Significant change was most necessary in administrative philosophy and personnel. The founding fathers (no mothers in 1972) were former high school administrators who naturally brought a public school frame of reference to the college. The president and academic dean applied great energy to nurturing community support, developing the physical plant, and husbanding the funds with careful allocation of salary and benefits. The curriculum offered was largely safe, traditional, and easily transferable to four-year institutions. The courses were primarily academic since the surrounding community was largely white-collar, middle income people little interested in traditionally vocational areas. Moreover, the founding administration took what many instructors saw as an in loco parentis attitude toward both student population and faculty. However, the multicampus spread and burgeoning size demanded that we move beyond the "mom and pop store" mentality and develop a new model for the future.

New Administration

The new administration has a university/community college frame of reference. The current chancellor, John Pickelman, reorganized the district office, putting vice chancellors in charge of duties such as finance, educational programs, and technical services, and changed the multicampus structure to a multicollege form, allowing unprecedented autonomy to the college presidents in terms of program development and budget planning. The colleges responded with an explosion of activity engaging all segments of the institution.

Most significantly, the administration and faculty are working together to revise instructional methods, student services, community outreach, and technological support. The process of review and revision has proved to be particularly revitalizing for faculty involved in new instructional delivery systems including collaborative teaching, distance learning, an honors program, and multicultural courses. Along with these innovations in instruction have come the necessary changes in student services and technology, the costs of which have been met by a combination of tax and tuition increases, grants (including Title III), and the establishment of legislative action groups and a College Effectiveness Council.

Instructional Changes

One of the most exciting issues in renewing faculty commitment and involvement concerns the review of the instructional program including interdisciplinary studies and the honors option. Beginning in the mid-1980's, a group of NHC instructors from the humanities and social sciences began meeting to discuss ways to integrate the subject matter of their different disciplines. They called themselves the Neo-Hegelians after the philosopher G.W.F. Hegel, who emphasized the wholeness of truth, the dynamic interaction of the various parts of truth, and the evolution through history of successively high levels of synthesis in the human grasp of truth. The Neo-Hegelians exchanged textbooks from courses in the history of world civilization, history of art, history of philosophy, and masterpieces of world literature, all two-semester sequences. From the study of these texts arose discussions on the possibilities of integrating the material into team-taught block courses.

In the spring of 1992, the President Sandy Shugart and Dean of Instruction Joe McMillian threw the first significant administrative support behind the concept by sending three of the neo-Hegelians to Washington state, which is renowned for block course teaching. Our team visited Evergreen State University and Seattle Central Community College, returning highly informed and energized after seeing as many as five disciplines combined into a single block constituting a full-time student load. The Washington state participants spoke of extraordinary class cohesion, as if the knitting together of the disciplines and the assignment of group projects magically produced a close-knit group of students. The closeness of the students, in turn, led to dramatically high retention rates in block courses. The faculty, too, described teaching with each other as the single greatest form of professional development that they had ever experienced. Their experiences also proved true at NHC.

The second phase of tangible administrative support for block course teaching came in the fall of 1992 when four instructors received a one-course release each for the preparation and teaching of the block course, one combining history of world civilization with history of art and the other combining history of philosophy with masterpieces of world literature. The blocks met twice a week for three hours per meeting. The provision of release times enabled instructors of both blocks to be in class during all of the weekly meeting times. The issue of whether to continue release time for the teaching of block courses already established is not a standard procedure but is settled instead on a case-by-case basis, depending on the instructor's statement of need for the extra time.

Some of the great moments in the block courses meeting 1992-93 included:

1. The literature selection of the book of Job raised the philosophical problem of evil, which was later developed in strictly syllogistic form after the class learned the fundamentals of Aristotle's logic.

2. Dante's Comaedia is richly based with philosophical references which students were in a position to appreciate by the time we reached the 1300's. For example, the fact that Virgil cannot guide Dante into heaven but must defer to Beatrice mirrors Aquinas's sequence of reason leading to faith.

We were able to observe from these and many other moments of integration class members coalescing through cross-disciplinary discussion. We also fostered the sense of class unity by having a class party at the home of one of the instructors.

Not all of the attempts at team teaching have succeeded: a combination of Composition I and Introduction to Philosophy failed to attract the necessary number of registrants. We are also beleaguered by a computer system that allows students to register for one half of a block but not the other. Nevertheless, the spirit of block course learning communities continues at NHC with new offerings being planned. One in the works will be called "Loss of a Center" and will explore the roots of and the solutions to the erosion of moral consensus in our society. This course will integrate themes from philosophy, art, history, and science. Another will be a PTK honors course on "Our Complex World: Balancing Unity and Diversity," and a third covers topics in leadership and will be "required" of student organization leaders and the college Ambassadors.

Honors Program

Another form of institutional renewal within the District is the inauguration of an Honors Program at North Harris College. Again, the concept had formerly been under discussion and a section or two offered, but the forces for full implementation did not coalesce until recently. Under the leadership of psychology instructor Sandy Deabler, a committee began meeting in the fall of 1992 to address whether a college that does so much for the least academically able in developmental programs might not also do something *special* for its top-caliber students. But what? Simply more of the same kind of work was not the answer; instead, the committee sought ways of providing enrichment, challenge, and collaborative learning for honors students. Two committee members attended the National Collegiate Honors Council Conference that year, and the committee also relied heavily on literature available from the Council and from Patricia M. McKee's survey on honors programs for the League for Innovation in Community Colleges.

During that year the committee refined its statements on goals of the program, student selection criteria, faculty selection criteria, course format, recognition of honors students, service projects for honors students, and administration and evaluation of the program. The NHC program now includes three ways of taking courses for honors credit:

1. by contract in a course that includes non-honors students.
2. by special honors sections of existing courses.
3. by special multidisciplinary honors courses.

Projecting to the future, the committee envisions three levels of student involvement with the program:

1. An Honors Student would simply be any student taking a course for honors credit.
2. An Honors Graduate would be a graduate who had completed at least 16 hours of honors credit.
3. An Honors Scholar would be an honors graduate who had completed a service project.

The implementation of the program began on a pilot basis in the fall semester of 1993 with the offering of honors credit by contract in the English department's Mythology course. Instructor Arlene Schultz successfully guided two of the approximately fifteen students through the terms of the contract, which included reading an extra book, making an extra report to the class, and attending four additional seminar meetings with the instructor. In the spring semester of 1994, honors credit was offered in biology, English, French, psychology, sociology, and Spanish courses. The English course, a sophomore-level survey of British Literature I, team-taught by Instructor Cher Brock and Academic Vice President Bill Richards, incorporates elements of collaborative learning with the required papers and exams and requires honors students to attend and conduct additional collaborative seminars during the semester. In order for the honors students to provide the leadership in class discussions, finish the required papers and presentations, and enrich their understanding of course material, the instructors and honors students have also developed a closer, more intellectually satisfying relationship than is usually possible in a typical class. The willingness with which the students communicate their questions and insights has been a revitalizing force for the faculty involved.

Though off to a good start, the program faces a number of challenges as it develops over the next few years. The initial enrollments have been low, so ways of attracting more students need to be explored. Some instructors oppose the honors program as a potential drain of talent from regular course sections. The issue of release time for the extra duties of teaching honors sections has not been resolved, and the outlines of appropriate services projects for honors scholars are but faintly limned. Still, there is much interest among the faculty at large, and there is high commitment to the program among the current honors faculty.

Title III

Another major revitalizing factor has been the opportunity for faculty from diverse disciplines to interact in planning and applying for grants, resulting in faculty and institutional renewal. The administration has been far-seeing in its willingness to support long-term goals. The Title III grant NHC applied for--and got--will help address what is seen as a critical need at NHC specifically. While the demographics and academic preparedness of the student population are changing rapidly and placing new demands on instructional programs, the faculty have lacked some of the tools, technology, and expertise to meet student needs effectively. Therefore, to supplement funding, the faculty became involved in the grant-writing process. The benefits of the grant have been and will be renewing for the faculty involved.

The process of planning and writing the grant began with meetings conducted by the Academic Vice President to discuss what the faculty saw as major problems. The early stages involved representatives from the English, modern languages, math, sciences, and business technology faculties as well as counseling and community education. An ideal picture of several areas was formed and, over a period of about a month, the field was limited to a more manageable and fundable scope, focusing on basic skills across the academic and technical curricula with flexible computerized assessment and accessible institutional research facilities to support current and projected enrollment. Then, the administration put its money where its collective mouth was: it provided one class of release time for each of the faculty writers of the grant, allowing each more time to research, collaborate, and write. The four faculty involved (one each from office administration, developmental studies, English, and math) worked with each other, their colleagues and department heads, and the VP with the April deadline for proposals always ominously in the foreground. Each writer came to trust the suggestions, criticisms, and epiphanies of the others as all worked through the arduous task of formulating, formatting, and finalizing drafts. No matter how different the disciplines, the writers learned about the similarities of the methods involved in the critical thinking, problem-solving, collaborative effort. The hours of close contact among the writers and the faculty and facilities of the other departments were a rewarding experience that has carried over to other interdisciplinary collaborations among them, benefiting the students and the institution. A few English classes, for instance, are now taught in OFAD labs.

Generally speaking, the grant is designed to increase student success and persistence by developing and improving five activities over a five-year period. Built into the first three activities are faculty training, travel, and curriculum assessment. The grant will involve approximately 70 members of the faculty each year in cycles of faculty training and will require equipment acquisitions, course development, and implementation of strategies which will support such developments. The grant has also required adding key support personnel, including an instructional design specialist, a workplace literacy specialist, an assessment coordinator, and institutional research specialists. Specifically, the major activities include:

1. the improvement of the developmental mathematics program by
    a. adding different instructional delivery approaches to accommodate student learning styles.
    b. acquiring computers (a 60-computer math teaching theater and computer projection systems for several classrooms).
    c. designing software and videos to enhance class, lab and individual effectiveness.

2. development of a Language Skills Center including such considerations as
    a. reviewing the current curriculum and developing assessment strategies for the writing sequence.
    b. adding computer-aided instruction (CAI) and computer-aided composition (CAC) to existing strategies (2 classrooms of 20 and 2 classrooms of 25 computers).
    c. training both full-time and adjunct faculty in design and CAI.
    d. disseminating information to peers and students.

3. development of an Applied Learning Center in order to
    a. analyze reading and writing needs of the technical occupational areas.
    b. diagnose specific reading and writing competencies.
    c. develop reading and writing tutorial materials relevant to the technical occupational areas.
    d. allow students to develop reading and writing skills concurrently with the technical skills required by using a flexible delivery system.
    e. provide a center where such instruction is available.

4. development of a computerized assessment center in order to
    a. improve the accuracy of student placement in classes and in programs based on information to help make informed academic and career decisions.
    b. improve the number of special needs students who succeed and persist.
    c. provide an alternative testing site for classroom tests.
    d. provide the faculty with training in test construction and analysis and with tools to modify and adapt programs.

5. development of an institutional research program to
    a. contribute to a more reliable level of institutional self-awareness.
    b. train faculty and administrators in research applications.
    c. develop applied research models in community needs, student outcomes, classroom research, and administrative effectiveness.
    d. collect and apply data logically and consistently.

Obviously, the collaboration required to re-examine curricula in the various areas has revitalized the idea of partnerships among the disciplines, and the connections formed with developmental studies as a foundation--in the writing sequence, the reading and writing modules for the technology certificate programs, the math sequence--will continue to encourage cross-disciplinary cooperation and innovation. What is most important, however, is that, with administrative commitment and with the coordination of the instructional designer and other support, the faculty are learning and applying technology and imagination to enhance and strengthen the effectiveness of instruction, a renewing factor for those dedicated to teaching.

NHC is not the only NHMCCD college to have been revitalized with the continuing incorporation of technology. Dr. Mary Ella Phelps, Division Head at Tomball College, reports: "Our art instructor, who is an established artist, has taken it upon himself to learn design graphics so that his students will be introduced to how artistic talent is a marketable talent. The Humanities committee has been excited about putting together a multi-media presentation to market their program. The English instructors have been amazing in their willingness to jump into a new way of teaching, and their excitement carries over to the students. As a result of the excitement. . ., many instructors meet together once or twice a week to teach each other what they have learned."

Committees

Two other salient examples of faculty revitalization are the district-wide Legislative Action Committee and NHC's College Effectiveness Council. The first example, as its name implies, works with state and local elected officials on matters relevant to higher education. Comprised of faculty and administration, the group has successfully lobbied allocations to support the college's nearly constant enrollment growth, but their efforts go beyond simply funding. Many members work with the legislature and state offices on policy development as well. The College Effectiveness Council at NHC studies where the college is and where it is likely to be headed. There have been extensive discussions with students, community leaders, local businessperson, and outside educators to discover what they think NHC is doing well and what needs to be changed. The demographic shifts, for example, will likely prompt increased need for developmental studies and ESL (currently the two fastest growing areas of the college), more emphasis on multicultural studies, and a welcome increase in minority faculty. We are also involved in developing curricula to train students for success in a postindustrial information age, assuring them a firm foundation in critical thinking and technological skills--attempting to create lifelong learners.

External Connections

Given the drastic demographic, economic, geographical expansion of the district, as well as significant technological shifts, the Board of Trustees and administration have been faced with major issues districtwide in order to continue to offer high quality programs, services, and instruction for the students, taxpayers, and businesses. The majority of these issues focus on change and the establishment of sustainable external partnerships. NHMCCD is dealing with making its comprehensive colleges centerpieces of a broader learning community.
Special activities implemented to build the partnerships needed include the following:

1. Establishing a broad-based Business and Industry Council (BIC) focused on regional needs for postsecondary education, workforce development, business and economic development, and corporate training.

2. Establishing broad-based Citizen Advisory Councils for each college to focus on strategic planning for facilities, programs, and effectiveness of the college.

3. Implementing College-To-School Board to Board Dialogue for planning and information sharing with ISD Boards and NHMCCD Board members.

4. Developing the Center for Business and Economic Development (CBED) to promote small business startup, ongoing business development, and customized/contract education and training. This development resulted in the creation of the Alliance of Chambers of Commerce (II) serving the areas.

5. Serving as location and providing leadership for two region-wide (13 counties) activities focused on Tech prep and on Quality Workforce Regional Planning.

6. Creating a partnership with the Montgomery County library system to establish a seamless learning resources access between the county libraries and NHMCCD college libraries.

7. Establishing a leadership role in regional education and economic development through such efforts as university partnerships with Our Lady of the Lake (North Harris College), Houston Baptist University (Kingwood College), The University of Houston (District Office), and numerous direct articulation agreements with universities to provide barrier-free transfer for students.

Conclusion

The revitalizing changes, then, have been managerial, pedagogical, curricular, and philosophical. Instead of mouthing platitudes about participatory management, the staff, faculty, administration, board, and community have formed a clear partnership dedicated to educating lifelong learners for the twenty-first century. The internal renewal has been challenging for all, but the majority agree that the changes auger well for the ability to provide the highest possible quality of service to students. Through the opening of communications, collaboration on all levels, and a willingness to risk, NHMCCD collectively has become a learning knowledge-based organization and has assumed a regional role in education and community development.

TEACHING MINORITY CONTENT:
A COMMUNITY BASED MODEL

Kenneth W. Kelly
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Abstract
This project involved an attempt at creating a new and more effective means of teaching minority content. The audience were senior social work students all involved in their major field placement experience. The focus for the project involved Native American content and was to involve examining, close up, direct service applications as they involved an Indian population. The teaching plan called for looking at clinical applications of social work services within the context of the tribal organization. This particular project happened to involve an Indian reservation, however, this method of "going to where the learning is" has some broader implications, particularly for dealing with minority groups and minority issues.

The concept contained within this presentation grew out of an effort to teach more effectively. It has long been my belief that there are simple, creative activities available to us that make learning both more fun and more educationally profitable. This particular project involved an attempt at creating a new and more effective means of teaching minority content. The audience, in this case, were senior social work students all involved in their major field placement experience. The vehicle for this teaching effort was a once a week, half-day seminar. The primary effort here was to attempt to integrate the teaching of minority content with the methods material in some more complete fashion than had ever been done with this course.

The focus for the project involved Native American content and was to involve examining, close up, direct service applications as they involved an Indian population. An Ojibwa reservation within a two hour drive from the campus was chosen as the site for the training. I was able to secure a $3,000 grant through a special fund, The Martin Luther King Jr., Rosa Parks, and Caesar Chavez Fund. That basic grant was supplemented with an additional $1,000 from within the University (College of Behavioral Science, Human Service, and Education) in order to carry out this project.

The plan involved going to the reservation, with the complete group of students (approximately 25), to spend a minimum of six full days on location. The design called for making three visits each semester so that this piece of curriculum would literally be extended over the entire academic year. The grant money was budgeted so as to provide for transportation for the students to and from the reservation, duplication of educational materials, and for hiring two instructors from the reservation. The instructors were both social work professionals in their own right and were on staff of the tribal center, in critical positions with regard to the health and human services activities of the center. The actual curriculum, the teaching plan, was developed by the tribal instructors and was coordinated with the University instructor. Decisions about what to include, what not to include, and what to emphasize were essentially made by the tribal instructors.

Before detailing the actual project and discussing the outcomes from this effort, two of the goals for this session are defined:

1. The first goal is simply to share an innovative idea that worked, in the hope that it may stimulate similar ideas to be carried out in the context of other's teaching environments.

2. The second goal, a hope really, is to encourage some discussion from within the group regarding this model and other possible applications.

The following is a sketch of the background which produced this project.

The teaching of content about minority populations and the efforts to sensitize students to minority values, positions, difficulties, etc., is not easily accomplished. The need to teach about race, ethnic, and subgroup difference really requires no explanation here, for teachers are all well aware of the importance of this content to their own areas of teaching practice. However, in no case is it more important that students grasp and have a working knowledge of this material than in the practice of social work.

The National Association of Social Workers Code of Ethics provides an overarching set of standards that clearly speaks to the need for cultural sensitivity. The Code speaks about the "primacy of client interest" and making "every effort to foster maximum self-determination on the part of clients." Program standards, as outlined by the Council on Social Work Education (social work education's accrediting body), are even clearer with regard to the mandate to include minority content. Program evaluative standard 12 states:

> The program shall make specific, continuous efforts to assure the enrichment of the educational experience it offers by reflecting racial, ethnic and cultural diversity throughout the curriculum and in all categories of persons related to the program.

Wynetta Devore and Elfriede Schlesinger in their text Ethnic-Sensitive Social Work Practice speak about a "professional perspective" that includes four "layers of understanding."

These layers are comprised of knowledge, attitudes, and skills that are important for all approaches to practice. These are:

1. A basic knowledge of human behavior.

2. A self awareness, including insights into one's own ethnicity and an understanding of how that may influence professional practice.

3. The impact of the ethnic reality upon the daily life of clients.

4. The adaptation and modification of skills and techniques in response to the ethnic reality.

The problems associated with developing a heightened sense of multiculturalism and responsiveness to minority issues is made somewhat more difficult in this remote and rural region of the Upper Peninsula. First, the University exists in an area of primary woodlands and forests (90% of the region is forested), and the principle industries relate to mining (both iron ore and copper), the timber industries, and recreation and tourism. It is largely a rural area of 16,538 square miles in size, comparable to the states of Massachusetts and New Hampshire combined, with a population of 313,000.

The population of the Upper Peninsula (U.P.) is largely caucasian with European, often Scandinavian, ethnic backgrounds. The most significant minority present are Native Americans owing to the presence of five reservations scattered across the region. It was, therefore, a natural choice that this project focused on Native American life. The 1990 census reveals that, throughout the entire Upper Peninsula, there are only 4,116 Afro-American citizens. This works out to be roughly about 1% of the population; however, even this figure is considerably misleading. There are, in the U.P., eight correctional institutions, three maximum security prisons, five medium to minimum security institutions, and at least three prison camps. The majority of the listed Black residents are housed in one or another of these institutions and are only encountered by a prison staff which is primarily white. In many cases, the custodial staff are native to the Upper Peninsula and have only met people of color as correctional inmates. Obviously, their experiences are limited, and their impressions often negatively biased. Away from the counties where the prison facilities exist, there are statistics like one Black person living in all of Keweenaw County, four Blacks living in Iron County, five Blacks in Mackinaw, 16 in Delta County which is the site of the second largest city in the Upper Peninsula. Again, the largest concentrations of Blacks are in the three counties, Chippewa, Marquette, and Alger, where the most of the prison facilities are located. For example, in Chippewa County the census data reveals there to be 2,184 Afro-Americans; however, there are five correctional institutions clustered together on what was a former air force base site.

Indeed, for the most part, students have a very limited experience with minority group members. Interestingly, where students have grown up in an area where there is either an Indian reservation or a significant Native American population, there are often negative, stereotyped notions which leave them less than objective. The faculty works, therefore, to incorporate as much minority content throughout the curriculum as possible.

Design of the Project

The particular course utilized for this project was a two-hour integrative seminar course that also has responsibility for teaching new methods as well (The course has since been elevated to three-credit hours). It is integrative from the point of view that it helps students pull together and blend field practice activity with the academic portion of the curriculum that they have already experienced. Additionally, though, the seminar introduces new methods content as well; group work methods are the focus for the first half of the year and organization and community practice are the subject for the last half of the year. All students are engaged in their major field practice experience, so all have an agency and are involved in direct social work practice. Typically, the students take no more than two courses in addition to their field practice experience, which is the equivalent of two days per week. In short, their time is a bit freer, and they have more schedule flexibility than students committed to a full-time (16-credit hour) academic class load.

Typically, some time throughout the year would be devoted to introducing social work practice issues related to minority populations. Guest lecturers have always been brought onto campus and the students involved with them to the extent that is possible. Assigned readings and classroom handouts are utilized but, again, they have limited usefulness.

It occurred to me that if, somehow, the students could be immersed in the actual environment being studied, a great deal more learning might occur. The presence of an Ojibwa reservation just 70 miles from campus made that idea seem feasible. If, however, students were to be taken to the site, instead of bringing resource people in, there would be some logistical and resource planning needed. First, it would cost considerably more to transport the students, and so money and some system of transportation was indicated. Actually, this University had long been advocating more minority content and thus had been making some funds available for speakers and programs that would promote multicultural awareness. It was just a short step from having the idea to writing a simple proposal to secure the special funding that was made available. For some reason, the grant was limited to $3,000 from the primary funding source which necessitated seeking additional money through the University. In fact, the Martin Luther King Jr., Rosa Parks, and Caesar Chavez funding was limited to the cost of hiring the tribal instructors, and that fact, necessitated additional funding for transportation and the duplication of printed materials. Probably, at any given time, everyone might have access to some similar source of funding, although one might have to be resourceful enough to discover that source.

The tribal center instructors received $1,500 each which amounted to $250.00 each for each of the six sessions. Their responsibility for planning and implementing the class was very complete, however. I did coordinate the effort to be sure the class sessions met the learning requirements of this seminar, but they chose the content and designed the presentation of material. They were also responsible for grading the assignments which were developed including a research paper related to this project.

Transportation involved one University vehicle and private automobiles in a car pooling arrangement. Students who drove were reimbursed $15.00 per trip. A figure of ten dollars per student was used to plan the cost of duplicating written materials.

Class Design and Rationale

As indicated, it was intended that there would be six visits that would extend over the entire academic year. There is learning that occurs over time that, in my estimation, can only occur over time. I felt that the time span of eight months created an educational opportunity that could never be duplicated with a few "snapshot" lectures or one or two visits. The idea was to help the students develop relationships with tribal personnel and seek out their own directions to as great a degree as possible. It was conjectured that as the staff and/or citizens of the reservation came to know the students they would also extend themselves and design some unique learning experiences for them individually. This would come about in two ways essentially. First, the students were expected to take the initiative and meet as many individuals as possible and, secondly, the students had to select some area of interest in order to develop a research paper. As they explored the tribal organization, the students were free to select any facet of human service delivery they chose for their research project. One student, for example, wanted to learn about Native American healing techniques and ended up with a relationship with a Medicine Man who lived in Minnesota. He was a relative of someone who lived at the Keweenaw Bay reservation. This was an excellent example of what I had hoped might happen.

The first three sessions (Fall semester) were designed to be both an orientation to that Native American culture and to the organization of human services as brought about by that tribe. The students met initially in the Tribal Courtroom, heard about the organization of the tribe, learned something about the history and evolution of this particular reservation, met and heard from tribal elders, met their instructors, and had some informal time over lunch and after class with everyone present.

The second session provided some review of the initial meeting and made some time available to "renew" the relationships begun earlier. On this occasion, the students were placed in smaller groups and were taken on a tour of the vast reservation land. Additional reservation staff were brought in to assist with the tours, and the students began to meet other tribal members in a variety of roles. Everyone ended this session with a somewhat different experience and with a different set of relationships from others. In short, they were all beginning to experience the reservation and the tribal organization somewhat differently. It would become clear, when they were back on campus, that they had somewhat different versions of the experience to share with each other. This, of course, was a real plus.

The third session then introduced the students to the human service units that existed within the tribal organization, i.e. Foster Care, Protective Services, Residential Care, Substance Abuse, Health Services, etc. Now the students were permitted to select one of these areas for further exploration. Frequently, this choice was made on the basis of whatever they were involved in for their field practice. In other words, students in a family agency setting tended to select the same service area at the tribal center to study. In this context, then they began to understand some of the variations and nuances involved with practicing in that culture as opposed to their own practice of social work. Many of the students were interested enough that they began to seek out literature sources and to look for explanations from the tribal staff. By the end of the first semester, every student had made some investment in the project and had gained some special knowledge that other students might not have. They knew somewhat different people and, of course, had different perspectives on the same phenomenon.

Every student was expected to select their topic for the research paper by the end of the first semester and now each of them was also in a relationship with the two tribal instructors. Those topics had to be screened and given some preliminary approval and that necessitated meeting with the instructors.

The second semester was designed so that the focus would be on organizational and community change as opposed to direct practice. It was interesting that just at the beginning of the second semester there was a change in leadership of the tribe and both of the instructors became political victims in that they were fired from the positions with the tribe. That effectively cut off access to the reservation temporarily; however, the students and college staff examined the organizational changes that were occurring, and it fit nicely into the educational plan.

Logistics

The details of arranging transportation, organizing car pools, getting people there on time, etc. were somewhat complicated. First, many of the students in the program are commuters coming from as far away as 70 or 80 miles from campus. Those students who lived in Marquette could rather easily gather for car pooling; however, those commuters made the trip from wherever their home community happened to be. Winter weather and hazardous road conditions proved to be somewhat of a problem, and, occasionally, people were either late or could not make the trip at all. The other major problem was that in order to carry this project out the students had to commit considerably more time than they would have to just complete the two-credit hour course. Travel time was probably a minimum of three hours, and then the time spent at the reservation was approximately five hours on each visit. In general, the students were curious enough and excited enough about the project that they were willing to devote this much time; however, it became clear that a few students were upset or angry about the additional time commitment.

Summary

One of the problems with creative and innovative approaches to learning is that they often require special time, additional planning, extraordinary efforts and something additional on the part of the students as well as the instructor. Projects, such as this one, do not neatly fit the format of the traditional university schedule, and so probably are frequently not even considered. If I had more carefully thought about some of the logistical problems, I, too, might not have proceeded. I am happy, however, that I did carry this project out because I feel there was a quality of learning that just would not have been available in the classroom. A few students felt the program was a "waste" of their time and that they did not essentially learn anything different. In some cases, even the students who felt they gained the most complained gently about the additional time commitment and the fact that they may have had to make special arrangements for child care or for work. I haven't yet solved the problem of how to gain this kind of experience without those headaches. I do feel, however, that it is worth pursuing because I felt that experience that I saw unfolding was dramatically different qualitatively than my other attempts to teach this content. By the end of this project, there were some significant relationships in place involving student and staff or residents of the Keweenaw Bay community. One student stated in an evaluation:

> Personally, this experience has enabled me to come to terms with past feelings and thoughts concerning this population. Not only have I been able to develop new insights, I have developed a special appreciation for Native Americans.

Another student stated:

> I enjoyed learning about the Indian culture and life on the reservation. I have come to appreciate their unique problems.

One real benefit was the time students had in their separate car pools to process the day's activities. In this connection, three or four Native American students, not officially involved with the class, were invited who interacted with the others and brought even different perspectives on the experience. This was an enrichment that hadn't been expected.

Of course there were a number of statements included in the evaluations indicating that "we should bring the speakers to the students."

One side benefit related to an improved relationship between the University and certain Reservation staff. They seemed to view this effort as a credible attempt to let them tell their "own story."

From the perspective of an educator, this project was particularly good for me. It meant that I had to let go of certain control and responsibility regarding this teaching assignment, and it was healthy for me to do that. Certain points were not made in the way I would have made them or perhaps those points were not made at all. The timing of demonstrating certain information was different than had I been managing it. In short, I also had to wait and listen and learn along with all of the students. I learned a great deal as a result of being in that position.

That, briefly, is my experience with an experimental project designed to more effectively teach minority content. While I felt personally rewarded for having made this effort, I have not yet been able to develop a more efficient means of duplicating the program. I would welcome any comments, suggestions, or impressions you might have concerning my effort, and I would especially welcome your ideas about how to carry this idea into other arenas. Thank you for your worthwhile participation.

THE UNDERPREPARED STUDENT:

A Student Centered Process Coordination Model

Responsibilities, Recommendations and Results

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Abstract
Part I of this paper was originally presented at the Palm Beach Community College's South Campus Center for Faculty Development in October, 1991. The original paper attempted to fit a relatively comprehensive literature search and the recommendations of campus faculty into a Student-Centered Process Coordination Model for Dealing with Underprepared Students. Part II explores the recommendations from the faculty break-out groups and discusses the long-term impacts related to faculty involvement in student development.

I. DEFINITION OF STUDENT UNDERPREPAREDNESS

A significant problem, as the research proceeded for this paper, was in locating a reasonably acceptable definition for student underpreparedness. Surprisingly, there was no universally accepted definition that encompassed the scope of the problem. For the most part, there also was no universal model of underdeveloped students. Piland and Pierce, writing in the Community College Review (1985), indicated that most states do not have a working definition of remedial education and are not convinced they need one.

The working definition used by Palm Beach Community College (PBCC) Florida is simple in terms of classification, but not very comprehensive: "those students testing below the state approved cut-off are considered underprepared" (Holden, PBCC, 1991).

However, as Mike Rose points out in his book Lives on the Boundary (1989), the students themselves, are so individualized in the manner of their underpreparedness that no model may ever be developed that would satisfy all cases. He proposes that each program be tailored as much as possible to the individual student and not to a class of students as assessed by some normed standard examination.

Judith S. Glazer writes:

> "We cannot assume that all students should be able to compete at the same level of performance, and that individual differences are a disadvantage to those who do not measure up to a national standard" (1989).

Individually designed programs may prove more successful, but they could also prove more costly since they become increasingly labor-intensive as additional teachers, counselors, and trained tutors would be required. There must be a better way to remediate the underprepared in a cost-effective manner while recognizing the essential individuality of each student.

A team approach using the Student-Centered Process Model is one option to integrate the student's individual differences with the skills and resources of a broad based constituency of faculty, Center for Personalized Instruction (CPI) staff, and counselors. With this model, it may not be necessary, or even advisable, to arrive at a precise definition of underpreparedness since it would not serve to resolve the problems of the underprepared and may actually hinder the remediation process by an overemphasis on classification.

The strength of this team approach is that it does not lay the burden of remediation program success entirely on the shoulders of a single department or group of people--it plays on the synergy of a dynamic relationship of many players in the educational environment. If this relationship, as graphically demonstrated in the model (see attachment), is working congruently; the student wins, the institution wins, and society wins as the student succeeds by persisting to graduation despite his or her initial underpreparedness to do college-level work.

II. PREDICTED IMPACTS ON COMMUNITY COLLEGES

Background

Many educators would agree that underdeveloped students will remain with us regardless of the intense efforts to reduce or eliminate the problem. The Institute for Future Studies at Macomb Community College in Warren, Michigan, reports in their annual Top Ten Issues Facing America's Community Colleges in 1991 that the numbers of academically underprepared students will continue to grow. Consequently, so will the problem of what to do with them in terms of assessment, placement, remediation, and counseling. Who will pay for these programs? Do they effectively bring underprepared students up to a level with their peers?

Palm Beach Community College (PBCC) reports that from 47 to 51 percent of its students are admitted classified as underprepared by virtue of state test scores (PBCC Office of Institutional Research, 1991). This percentage is roughly equivalent with other community colleges nationally, a fact which diminishes causality from community sampling effect.

Community colleges certainly attract many students who could not gain admission to a university based on test scores or high school GPA; but equally, community colleges attract academically qualified students simply seeking a break in tuition for the first two years of college. This enrollment places a significant burden on community college faculty who must deal with a greater diversity in the mix of students than do their counterparts in the highly selective university.

However, many faculty believe the percentage of underprepared students are misleading since some students manage to pass above the floor level of state tests; yet, they perform submarginally in the classroom. This information is further validation that the exclusive use of test scores to classify students may be flawed. Also, potentially good students may be misclassified as underprepared since they simply may not be "good test takers"; and other students, who may need remediation to succeed, may marginally pass the state test and move prematurely into the mainstream at increased risk.

A more distressing statistic emerges the from the examination of the profiles of graduates to determine how many in that group needed remediation at some time in their academic experience. According to Palm Beach Community College's Office of Institutional Research, only about 10 to 12 percent of PBCC graduates took any remediation courses.

It would be inappropriate to conclude statistical significance directly from a simple comparison between the entry and exit statistics offered above. There are too many intervening variables between entry and exit to conclude or predict a relationship.

Eileen Holden, PBCC's CPI Program Manager, cited a number of students, particularly ESOL learners, who enter college for a specific purpose other than to obtain a degree. Although her evidence does not account for the skewed difference between entry level underpreparedness percentages and the significantly lower percentages of graduates who needed remediation at some point in college, the percentages strongly suggest further research is needed to develop an enhanced student tracking system to establish a valid database for a more extensive multivariate analysis. Only then would a possible, and, I might add, a probable empirical link be discovered.

Cost of Preparing the Underprepared Student

Generally, many colleges and universities report in the literature that the cost of offering remediation programs are high. This fact is true of the most aggressive programs since they are typically better staffed with well trained faculty, counselors, and tutors. Programs experiencing marginal success rates may be less costly in direct budget dollars, but also are often less effective in terms of the numbers of students who actually persist to graduation, the perceived goal of any developmental program.

Again, with improved student tracking systems, assessing programs using cost-benefit analysis improves both the budgeting process and the effectiveness of the program. It is important to know when a program could be enhanced by a moderate infusion of budget dollars resulting in a significant incremental increase in results. Also, it is important to know when throwing more money at a problem is not the solution given; given the law of diminishing returns, program changes may need to be identified first.

Regardless, if more than half of all entering freshman arrive at college largely unprepared to enter the mainstream of academic work, remediation in some form is a necessary and expensive conclusion. But, some faculty have expressed resentment since these programs can be narrowly viewed as siphoning available funds from other, legitimate educational programs. Program salesmanship often must begin with the faculty.

The reality is that student enrollment is vital to the continued growth of any college, and the reality is, also, that half of them will not be prepared. Essentially, like them or not, developmental education programs are here to stay. However, the most important focus of institutional resources should be on the students and their persistence to graduation.

The impact on the community college goes beyond budget considerations. The problem demands an integrated team approach which includes faculty (not just developmental program faculty), counselors, CPI staff, and others, including peer counselors and peer tutors, to work with underprepared students.

One responsibility of the community college is to prepare students for either a terminal degree or certificate enabling them to enter the work force directly or for an Associate in Arts degree enabling them to transfer to a four year institution. It is not the role of the community college to be viewed as a way station for the non-college bound student, nor as a contributor to the "Dumbing-down" of America, nor, as I have heard said many times, to be viewed as a grade 13.

III. FACTORS BEARING ON THE UNDERPREPARED STUDENT

Given previous studies (Tinto, 1975; Nora, Attinasi,& Matonak, 1990; Rose & Hull, 1989) citing the wide range of disparities among underprepared students leads conceptually to a student-centered focus. The most critical factors should be examined so that planned interventions into individual student underpreparedness problems can be implemented by an integrated program involving faculty, staff, and the student.

If a purely program focus is maintained, as determined by faculty or CPI staff, then only those individual student problems that can be helped by that particular program will be adequately addressed, while much of the rest falls through the cracks. This situation may lead to at least one explanation as to why so few remedial students make it to graduation. The program was a success, but the student failed.

Faculty Involvement

> "The role of the faculty member must change from gatekeeper to guardian. Their job must not be to weed out students, but to help them succeed" (Banach, 1991). Research repeatedly bears out that there is no stronger link between student success and failure than a dedicated, involved faculty. Indeed, the closer the link between individual faculty and individual students--a mentoring relationship--the more likely the student is to succeed, not only in that faculty member's course, but in other courses as well.

There is no substitute for the bond between teacher and student. Many students have been found to overcome seemingly insurmountable academic and social handicaps to persist in their education at the encouragement of a single faculty member who became a role model or significant other in the life of the student.

In order to assist faculty in maximizing their effectiveness in these teacher-student mentor relationships, it is necessary to promote development programs for teachers. These programs should address the role of teachers in supporting and encouraging the underprepared student. Further, these programs should increase the sensitivity of teachers toward the variety of problems of students, the sources of specialized assistance, and the major importance of faculty-staff-counselor cooperation and close followup.

This charge sounds relatively simple until other considerations intervene such as larger classes with high student-teacher ratios, the increasing use of adjunct faculty who do not have campus office hours, and the increasingly large numbers of underprepared students. Then supportive one-on-one mentor relationships collapse under the sheer weight of time constraints.

Obviously, in the face of these limitations, there are no easily implementable solutions. However, it is nonetheless important to remember that often it is the one individual faculty member making the difference in the one individual student's life that makes all the difference in the world for that student.

Further, due to time constraints, that individual faculty member must work in closer coordination with the other players such as the CPI staff, tutors, and counselors. Again, this approach supports the conceptual model of a Student-Centered Process Coordination Model which involves a number of closely interested parties. The focus of attention falls on the student without the burden falling on any single player.

The Student's Family and Family History

Of possible lesser importance than faculty involvement, but still significant, is the role that a student's family plays in the persistence of that student to overcome academic deficiencies and graduate from college. Family factors contribute in part to the wide diversity of students entering college and the differing reasons for their academic underpreparedness.

Closely related are issues such as the student's socioeconomic condition, education attained by one or both parents, the level of warmth and support shown the student by family, and for adult students, whether or not they are married and whether or not the spouse and children are supportive.

A common example can be made by examining the single parent who could be a good student but who gets poor grades due to pressures experienced at home and at work (Rose, 1989). This student may be academically underprepared or just overpressured by life choices. In either event, planned intervention is appropriate to diagnose the problem and to work with the student toward solutions.

Again, support exists for the adoption of a concept of closer cooperation and coordination between faculty, CPI staff, counselors, and, of course, the student. A teacher may identify a problem student, establish through interaction with the student that a life choice problem exists, and refer that student to trained counselors who can then make recommendations.

On the other hand, the student may exhibit academic weaknesses that can be treated through a remediation program offered by the CPI staff or just additional tutoring to further emphasize class work. The faculty member can then follow up with the student, the counselor, tutor, or other staff, and make accommodations as appropriate to the circumstances.

Research has demonstrated that students from broken homes, from parents who did not attend college, from lower socioeconomic neighborhoods, from secondary schools that do not normally prepare many students for college, students that are adults but single, and students that are minorities are more often at risk on entering college (Rose, 1989). These external factors are not controllable by either the student or the college.

However, they are surmountable. Case history research (Rose, 1989) demonstrated that students can overcome these obstacles and persist to graduation, but often not without significant assistance from faculty, staff, and no less than the tenacious commitment of the student.

The Student: Self-concept, Expectations, Commitment

The student is the center of the process. The motivated or motivatable student is the one most likely to succeed, given a supportive family and a supportive institution providing positive educational experiences. There can be severe limitations in the other factors mentioned; and yet, the motivated, committed student expecting to graduate is most likely to graduate.

It can be speculated that one reason the faculty-student mentor relationship is so important is the fact that the bond serves to stimulate the internal motivation to succeed. If no one else believes in the student, the student must believe in him or herself, and sometimes that belief system grows from the belief and encouragement of that one significant teacher--a guardian.

In the literature and in interviews with CPI managers and academic counselors, lack of motivation seems to be the most significant factor in ending many student's academic efforts. The frustration is keen. The student may not be in any way academically handicapped yet fails anyway to make satisfactory progress. Again, students must be evaluated as individuals rather than as a set of test scores. That is the only way to explain why a student who could be successful fails.

Jeanne L. Higbee (1989) identified three subgroups of students entering orientation programs and described ways to meet the diverse needs of the three subgroups as follows:

1. The underprepared student who is motivated but needs skill development:
    a. setting goals and objectives
    b. time management
    c. note taking
    d. reading comprehension
    e. memory skills
    f. taking exams
    g. decision making
    h. reducing stress
    i. math anxiety

2. Underachievers lacking motivation:
    a. values clarification
    b. career exploration
    c. time management
    d. health and wellness
    e. reducing stress
    f. creativity
    g. taking control of life

3. Students not at risk academically but needing orientation to college life
    a. adjusting to college life
    b. developmental tasks of late adolescence/early adulthood
    c. health and wellness
    d. race and gender issues

The point Higbee makes is that students in any of the three subgroups could enter college at varying levels of risk and fail to make adequate progress since their individual problems were not addressed by the institutional system.

College and Campus Atmosphere

Another important factor in a student's success, any student, is the atmosphere of the academic environment. Is it warm and supportive to the student, regardless of risk level, or is it a "sink or swim" survival experience--cold and imposing? Many students enter college for the first time with a sense of anxiety as they face a strange new environment where they don't not know the ropes, don't know their way around, and don't have any friends or family near the campus. These problems further exacerbate any preexisting academic underpreparedness. Indeed, many good students suffer "grade slump" during the first one or two semesters in college. The underprepared student starts out below the margin and may never progress without significant assistance from a college that seeks out the student and offers a helping hand toward adjustment.

Campus collegiality is listed among the top ten challenges for the nineties as indicated by The Institute for Future Studies in its 1991 report. Literature is largely silent as to how this collegiality is to be made a reality. This process remains a challenge to all faculty and staff, making the campus a "kinder, gentler place."

Availability of Remediation Services

Obviously, the utilization of remediation services by students self-selecting to seek those services depend largely on two issues: availability of programs and stigma attached to participation in those programs. Availability is probably the most significant, since the more prominent the program, the more likely students will seek assistance on their own.

Also, the program must be closely aligned with the mainstream of academia, not a sideshow. This coordination lends legitimacy to developmental departments sought by students who need the services, by the students who do not need special help (at least not now), and the staff who serve in the program.

The more successful programs discussed in the literature are all specifically included in the mainstream of campus academic activities. The tutorial staff are predominately full time, well trained professionals, not just good students earning some work-study money. The developmental staff must have true faculty status with all the rights and privileges of the regular faculty including tenure or continuing contracts. The program must have departmental status equal to that of any other academic department including a permanent program budget. The developmental staff should be represented on all academic committees as full members.

Other College Staff (Counselors and Tutors)

Peer tutors have been shown to be the most effective with most students particularly as long as the tutors have had an intensive training program in handling underprepared student problems. It is important to note that untrained peer tutors fare least well; while professional, full time teacher-tutors do better, but not as well as the trained peer tutors (Rose, 1989).

The results of several studies demonstrate that peer tutors, who are well trained and supervised, provide the best chance of assisting the underprepared student and are more likely to be favorably accepted by the student being tutored. The only exception in the research cited were black male students who didn't seem to like anyone (Glazer, 1989).

Counselors were examined and evaluated in several studies as to the nature and scope of their work in the college environment. They ranged from offering minimal assistance to the student--for example, merely giving a shopping list of courses from the school catalog that would be needed to graduate with a specific degree--to the fullest range of individualized counseling services working closely with other players in the college environment.

Judith Glazer (1989) reports on five critical areas of counseling required to comprehensively assess and intervene into student underpreparedness: academic, financial, personal, vocational or career, and psychological. This level of counseling, however, requires increasing the intensity of the counselor-student relationship while improving the counselor-student ratio.

Since the highest attrition rates occur during the freshman and sophomore years where 46.8 percent of the students leave school, Glazer recommends that counseling intensity is most critical for students during these first two years.

IV. FACULTY BEARING ON THE UNDERPREPARED STUDENT

This paper was originally presented at the first conference organized by the Faculty Development Center at Palm Beach Community College's South Campus in Boca Raton, Florida. The conference consisted of several paper readings on related issues of student underpreparedness, a panel discussion, and break-out groups to work through the Student-Centered Process Coordination Model.

The faculty and academic support staff (n=47) randomly sorted into interdisciplinary groups to discuss methods and procedural changes related to the theme of the conference. The charge to the groups was to brainstorm an organizational reorientation within the theoretical framework of the model (see attachment for a diagram of the model). The focus of discussion was to be toward changes that could be made by: 1. the college as a whole (four campuses); 2. the South Campus as a unit; and 3. the faculty on the South Campus.

The results of the break-out groups were initially encouraging, but the long-term commitment to change was a disappointment. Of greater importance, the impact of the entire effort was futile since two years later the initial percentages of student retention remains constant at a lower level than any institution would like to experience.

An attachment titled: "Faculty Development Center: The Underprepared Student Faculty Recommendations" lists the specific recommendations resulting from the break-out groups. Each issue was discussed with all the groups at the end of the conference to share their ideas. Each idea or recommendation was placed on a large poster-sized representation of the model approximately where it fit on the transactional arrows between the four primary actors in the process. This representation illustrated how the model worked and how each idea or recommendation from the different break-out groups fit within the model.

Many of the recommendations made by the participants fit well with the literature recommendations reported in the original paper. This correlation was particularly true with emphasis placed on increased faculty-student interaction, increased emphasis on pre-college advisement, increased counseling staff, increased facilities for adjunct professors to meet with students outside of class, increased cooperation between faculty and CPI staff, and increased formal referrals to the CPI staff from the faculty. A survey of students to gather information on course loads, time constraints, and their work schedule as well as family issues was recommended to get to know students for better advisement. Each suggestion for change would serve to individualize the program for the benefit of those students entering college at-risk.

Two months after the conference, the original paper and the recommendations from the break-out groups were reviewed by a small committee represented by two discipline department chairs, the Director of the South Campus Center for Personalized Instruction (CPI), the South Campus Continuing Studies Coordinator, and one faculty member. A memo was prepared for the Provost, the Dean of Academic Affairs, and the Dean of Student Affairs outlining the committee's views on the feasibility of the recommendations. Of the 39 original recommendations, 16 were rejected as unrealistic, 19 were recommended for further study, and 4 were passed over as too vague to effectively consider. Further, of the 19 that were recommended for further study, none were studied, followed-up or ever implemented.

Essentially, in academic year 1993, the statistics for underprepared student performance remained much the same as it was in 1991. Failing to change the way an institution works with its underprepared students translates into no improvement in retention or persistence to graduation. The conclusions offered in the paper seem validated by the results experienced here by one institution by its failure to act on an obvious problem.

ANNOTATED BIBLIOGRAPHY

NOTE: This bibliography contains some material not cited in the body of the paper. It is offered to the readers as a reference list.

1. Ackerman, Susan P. and Byrock, Gayle J. (1989). Freshman Summer Program and Transfer Summer Program. Phase I. UCLA, Office of the Provost. 247 pages.

This extensive review of UCLA's summer program for underprepared freshmen demonstrates the commitment of a campus to assisting students in their transition into college. The authors review many aspects of the program from the training of peer tutors to departmental organization and departmental placement within the academic community of UCLA. The review can form a template for the development of similar programs nationally.

2. Bray, D. (1987). Assessment and Placement of Developmental Highrisk Students. In K.M. Arendt's (Ed.), Teaching the Developmental Education Student. New Directions for Community Colleges, (pp.33-47). (Report #ISBN 1-5542-958-0) Office of Educational Research and Improvement. San Francisco: Josey-Bass (ERIC ED280519).

Bray's model focuses on the linkages between assessment and instruction producing a broader definition. He indicates four major trends: a majority of college students have deficiencies in one or more of the basic skills; colleges and industry are raising their expectations in terms of competency; remediation is fast-growing within the curriculum; and most colleges identify students needing developmental courses through assessment as entering students.

4. Carbone, G.J. (1987). Academic Support Services for Developmental and High-risk Students in Community Colleges. In K.M. Arendt's (Ed.), Teaching the Developmental Education Student. New Directions for Community Colleges, (pp.23-31). (Report # ISBN 155543-958-0) Office of Educational Research and Improvement. San Francisco: Josey-Bass. (ERIC ED280519)

Carbone believes that success of a student depends on factors beyond the remediation of basic skills. A holistic approach is essential. Keys to effective programs include: strong administrative support, mandatory assessment and placement, structured courses and followup, award of credit for developmental courses, flexible completion features, multiple learning systems, extensive use of peer tutors, frequent monitoring of student behavior, interfacing with subsequent courses, and program evaluation based on adequate data collection. Carbone further emphasizes student motivation and faculty assistance.

5. Cohen, A.M. (1985). Helping Ensure the Right to Succeed: An ERIC review. Community College Review, 12(3), pp.4-9.

Cohen reports that since the "right to fail" has gone the way of other unfounded experiments in education, many community colleges have gone back to previous patterns of mandatory testing and placement of students in classes according to their probable chances of success. Lack of new students has shifted emphasis to retention to graduation. He believes that the success of remediation programs begins with a buy-in attitude of "we care".

6. Cohen, A.R. (1987). Responding to Criticism of Developmental Education. In K.M. Arendt's (Ed.), Teaching the Developmental Education Student. New Directions for Community Colleges(pp. 3-10). (Report #ISBN 1-55542-958-0) Office of Educational Research and Improvement. San Francisco: Josey-Bass. (ERIC ED280519).

Cohen believes that since a large portion of students who enter community colleges with inadequate basic skills dictates that developmental studies be at the heart of the curriculum and involve all college personnel. He addresses six key complaints about community college involvement in developmental education including the one about remediation programs should be separate from mainstream academic programs. He also points out that articulation between community colleges and secondary schools should be enhanced.

7. Glazer, Judith S. (1985). Education for the Disadvantaged: The Higher Education Opportunity Program in New York State. (ERIC ED323833). 19 pages.

Glazer recommends mandatory summer transition programs for underprepared students which would include tutoring, counseling, developmental and remedial courses for credit and noncredit, and pre and post program testing for placement and evaluation. She also proposes comprehensive counseling in five areas: academic, personal, financial, vocational/career, and psychological. She uses two major models to explain educational progress: entering student characteristics and college environmental factors.

8. Goslin, Joseph C. (1989). Underachievers: A Curriculum Design. Preventing School Failure. (pp.22-28).

Goslin is another holistic approach to the underachiever. He believes the failure of the system begins as early as junior high school and continues until the system no longer lets the student slide through. Some important student characteristics include: student does not commit himself to concrete goals, does not keep a record of progress, does not feel he belongs to a successful group. Goslin also offers a litany of statistics on the dismal performance of high school students. Radical reform is the only remedy.

9. Higbee, Jeanne L. (1989). Orientation Courses: Meeting the Needs of Different Student Populations. 21 pages. (ERIC ED311801)

Higbee recommends that orientation not be major programmatic but be adjusted to differing student populations from the underprepared but motivated to the unmotivated student. She offers some specific guidance, but it is not a template for establishing such an orientation-remediation program.

10. Hull, Glynda and Rose, Mike, (1989). Rethinking Remediation: Toward a Social-Cognitive Understanding of Problematic Reading and Writing. (Technical Report #19), Center for the Study of Writing, Berkeley, CA., Center for the Study of Writing, Pittsburgh, PA. 19 pages.

Both authors attempt a new interpretation of what is acceptable writing styles and demonstrate that at face value, writing that appears substandard is a student's attempt to document reality as that individual student sees it.

11. J. Daniel House and Victoria Wohit (1990). The Effect of Tutoring Program Participation on the Performance of Academically Underprepared College Freshmen. Journal of College Student Development, Vol 31. (pp.365-370).

A comprehensive overview of successful tutoring program strategies and demographics of students who seem to find tutoring most successful given the characteristics of the tutor. Trained peer tutors seem to fare the best.

12. Kelly, D.K. ~1988). Motivating the Underprepared Unmotivated Community College Student. (ERIC ED299009).

Kelly points out that all motivated students are welcomed in community colleges whether underprepared or not. The author believes that anyone who really wants to improve their skills can do it with motivation. Two kinds of unmotivated students are apparent; those who have the abilities and those who are deficient in basic skills. The author concludes with the fact that the underprepared are here to stay and the challenge is for the community college to develop coping strategies.

13. Nora, Amaury, L.C. Attinasi, and Andrew Matonak (1990).

Testing Qualitative Indicators of Precollege Factors in Tinto's Attrition Model: A Community College Student Population. Review of
Higher Education, Spring, Vol 13, No. 3. (pp.337-356).

This is an extensive report supporting Tinto's earlier (1975) research on qualitative factors bearing on student attrition. It forms part of the basis for my concept of a Student-Centered Process Coordination Model for Dealing with the Underprepared Student. The work of Tinto and those replicating his research is more empirical based on statistical analysis of real populations. Some sophistication in multivariate analysis is required to fully understand this article.

14. Ochroch, S.K. & Dugan, M. (1986). Personality Factors for Successful High-risk Students. Community/Junior College Quarterly 10 (pp.95-100).

The authors' purpose of the study was to identify personal factors related to academic success of high-risk students. The highest-risk students (those least successful in terms of persistence and grade point averages) were young, black males who were single, unemployed and receiving financial aid. More successful of the group were female and married. The successful group scored significantly higher on self-esteem, assertiveness, and internal locus of control. The unsuccessful were controlled by chance and stress. The authors conclude that there is a need for equal attention to personality factors as well as basic skills development in dealing with high-risk students.

15. Piland, W.E. and Pierce, D. (1985). Remedial Education in the States. Community College Review, 12(3), pp.16-20.

Based on a three page survey to all 50 states directors of community colleges, of which 40 responded, most states did not have a working definition of remedial education and did not feel they needed one. Also, 62 percent of the respondents reported more emphasis on remedial education than five years ago.

16. Pobywajlo, Margaret (1989). The AFY Program at UNHM: Reaching Out to Underprepared Students. 8 pages. (ERIC ED324673).

A brief overview of a community college division of the University of New Hampshire. The underprepared students attend what is called an Alternate First Year which is developmental in nature specifically to prepare them for transition into UNH's regular academic schedule.

17. Robinson, Patricia W. (1990). Development of Study Skills Curriculum as a Component of the Act I Extended Freshman Orientation Experience at Brenau: Curriculum and Program Planning. 46 pages. (ERIC ED323864).

Robinson presents a detailed overview of basic skills development in a program designed to offer freshman a longer orientation period recognizing that all students do not necessarily pace at the same speed.

18. Rose, Mike (1989). Lives on the Boundary. New York: Penguin.

This book of case studies and antidotal on various issues such as the politics of remediation, and others, is must reading for anyone interested in developing a successful program or trying to determine why an existing program isn't living up to expectations. Rose points out emphatically that students are individuals coming to college labeled as underprepared, but each with different reasons for being behind his or her peers and programmatic solutions will not capture all the students, only the ones whose specific problem is treatable by the program's major emphasis. Rose recommends a more individualized approach and agrees with other authors that developmental programs require administrative support, recognition, job security and a role in the mainstream of academic activities on campus.

19. The Top Ten Issues Facing America's Community Colleges, 1991
Edition. Macomb Community College Institute of Future Studies. Warren, Michigan. 28 pages. ~ERIC ED327248).

At least two of the top ten issues cited in this work bear on the underdeveloped student: one, that there will be more of them and two, that collegiality on campus needs improvement.

20. Long Beach City College, Center for Faculty Development. Strategies from the Faculty: Working with Underprepared Students.

This is a handbook of ideas developed by the faculty at Long Beach City College using a similar forum to our own Center for Faculty Development at Palm Beach Community College South Campus.

Faculty Development Center
The Underprepared Student
Faculty Recommendations

The following recommendations were made at the program held October 18, 1991.

Recommendations To The College

1. Mandatory counselling for unresponsible academic behavior
2. Letter for notification of failing grades at midterm
3. Smaller class size in the skills building courses
4. Prerequisite testing for all students--enforced
5. Drop and Add period prior to start of semester
6. Required study skills course, i.e. College Survival Skills
7. Better system to enforce prerequisites
8. Emphasize more faculty and student advisement and involvement; deemphasize committees
9. Monies for adjuncts to tutor or counsel
10. Lobby legislature for proper funding for remedial program
11. Enforce sequencing of courses
12. Offer sections of existing course for underprepared students
13. Send literature to high school students informing them of minimal skills needed and study time required to succeed at PBCC

Recommendations To The South Campus

1. CPI staff can teach reading out of course text books
2. Offer a "Strategies for Succeeding at College" program during the mandatory orientation.
3. Liaison to high schools to teach study skills and develop rapport with high school teachers; improve articulation
4. Increase counselling staff
5. Focus student orientation on academic expectations and support systems; include time management segment
6. Continue faculty development interaction
7. Assignment of a counselor to each discipline
8. Facilities for adjuncts to meet with students
9. Reduce class size for effective interaction
10. More formal communication between CPI and faculty
11. Block remedial students from taking courses which require the skills being remediated
12. Follow up on the recommendations made

Recommendations To The Faculty On The South Campus:

1. Student and faculty mentoring
2. More involvement between faculty and CPI staff
3. Faculty tutors in CPI
4. Upgrade course standards
5. Suggest techniques to help students: computer programs, study groups, peer tutors, study skills
6. Provide diagnostic tests in the first week of class
7. Require students to view "Where There's A Will There's An A"
8. Formal referrals to the CPI with follow up
9. Survey students for information related to course load, time constraints, work schedule, family responsibilities in order to get to know them
10. Faculty in same discipline exchange class sections for a day or two
11. Faculty should meet to discuss interdisciplinary approaches to teaching all students

12. Reinforce basic skills in all classes; test or evaluate almost every class meeting; give assignments that can be checked in steps
13. Obtain a writing sample
14. Include information about student success in your course on the syllabus

TEACHING IN CONTENT AREAS

Proceedings of the Eighteenth
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THE RIGOR AND EXORBITANCE OF READING: TEACHING CRITICAL THINKING IN THE FRESHMAN HONORS SEMINAR

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Abstract

Traditional textbooks on critical thinking teach students to develop skeptically intellectual responses to the texts they read. Genuinely powerful and generative forms of critical thinking require teaching students to read creatively as well. The work of Troyston Roberts, David Killefer, Sigmund Freud, and rhetoricians Richard Young, Alton Becker, and kenneth pike provide an intellectual framework for designing assignments that emphasize the creative dimensions of reading.

Introduction

When the mystical painter and poet William Blake wrote "I must Create a System, or be enslav'd by another Man's" ("Jerusalem" 288), he inadvertently articulated the highest goal of liberal education. As members of the academy, most of us want to help our students to create a "System": that is, a logically consistent world view, an ethically coherent vision of life. The academic disciplines we seek to instill, however, are riddled with systems that we and our colleagues would impose, either consciously or unconsciously, upon our unsuspecting charges, systems encoded in our disciplinary boundaries and procedures, our personal idealogies, our social values and political convictions. For our students' sake as well as our own, we must be careful that we do not merely perpetuate in, and to question, the processes of system-making--fostering the kinds of intellectual self-awareness generally treated as a higher order of "critical thinking."

When used to describe a pedagogical aim or method, however, critical thinking becomes immediately if not intractably problematic. What, precisely, do we want our students to critique? How should they conduct their critical activity? If not carefully monitored, critique itself replicates and perpetuates existing systems, hindering rather than fostering the development of new systems of thought.

Freire Pedagogy

In Pedagogy of the Oppressed, Paulo Freire agues that education must uncover the nexus of power relations that oppress our students' lives. Its goal is not disinterested contemplation, but freedom. Blake would applaud these aims, and, at first glance, he might well find the methods equally attractive. In Freire's system, the teacher does not impose a program; instead she poses problems that teacher and students work together to solve. However, as such sympathetic practitioners as Gregory Jay and Geoffrey Graff have recognized, such a pedagogy is less liberating than first glances might suggest. They ask:

> "How real can the Freirean dialogue be, when Freire clearly presumes he knows in advance what the authentic 'will of the people' is or should be? However much Freire may insist upon teaching 'problem-posing' rather than top-down solutions, the goal of teaching for Freire is to move the student toward a critical perception of the world,' and this critical perception 'implies a correct method of approaching reality.'"

Critical Perception

This critical perception is predetermined: the student is either oppressor or oppressed. The limitations of Freirean pedagogy become evident when we consider the question raised by Jay and Graff:

> "Suppose a student ends up deciding that he or she is not oppressed, or is not oppressed in the way or for the reasons Freire supposes?...Freire can only count such decisions as the result of the student's having been brainwashed by the dominant culture."

In this model, critique is reserved for society, not for self. It is an aggressive, not reflective, process with predetermined aims and conclusions. As Jeffrey Robinson, a devoted proponent of Freirean pedagogy in the literature classroom, explains, a "radical literacy education" based on Freire's model should undermine and subvert aestheticism with political consciousness. Clearly, this education is about power, not beauty or truth.

The so-called "oppositional pedagogy" of Donald Morton and Mas'ud Zavarzadeh engages even more openly in a pedagogy of power and exacerbates the Freirean reluctance to engage in self-reflective critique. Jay and Graff again illuminate the blindness of it political aims and methods. As they explain, "The teacher is not only authoritatively right about the issues but is also justified in assuming the inauthencity of the student's opinions"; "he or she treats each students viewpoint as merely another case of false consciousness to be demystified". Again, under the guise of freedom and power, this pedagogy engages in intolerant and unreflective radicalization, confrontation, and indoctrination.

Counterpoised against this pedagogy of power is the pedagogy of truth that Plato articulated in Gorgias. In this dialogue, Socrates explores the aims of "liberal" education, which fourth-century B.C. Athens situated in the study of rhetoric. In this dialogue, Gorgias, the noted rhetorician, argues that rhetoric is good because its confers the power to satisfy one's desires or to destroy one's enemies. That is, rhetoric gives one person power over others. As Socrates relentlessly exposes the venality and dishonesty of Gorgias, Polus, his young disciple, and Callicles, his host, the three become successively more menacing, with Callicles obliquely threatening use his own considerable powers of oratory to destroy Socrates in a court of law, thereby foreshadowing Socrates' death.

Socrates' reply to Callicles' threats is as surprising today as it was twenty-three centuries ago. He argues that philosophy it superior to rhetoric better because it gives power over one's self, rather than over others. Furthermore, it is better to suffer wrong than to commit wrong, because the first may improve the soul while the second inevitably destroys the soul. Unlike Freire or Morton, Socrates seeks moral improvement, not political power. His method is self-reflective rather than confidently aggressive; it pursues the painful and elusive benefits of truth, not the apparent yet morally perilous benefits of power.

As these summaries suggest, a pedagogy for critical thinking that this writer would foster owes more to Plato than to the contemporary pedagogies of the radical left. (Or for the right, for that matter. This presenter certainly envisions more than taking students for a spin down Rush Limbaugh's "turnpike of truth.") Specifically, such a pedagogy shares in the Platonic indirection, its belief in transcendent benefits, its willingness to suffer as well as to assert. In design, this pedagogy would not seek for truth by perpetuating a myth of objectivity but by a deft balancing of dualities. It does not end in a skepticism, but it does foster what John Keats called "negative capability," which he defines as occurring "when a man is capable of being in uncertainties, mysteries, doubts, without any irritable reaching after fact and reason" (370). It pursues truth while recognizing the inevitable will to power that colors--and all too easily transmogrifies--that pursuit. Finally, it seeks to encourage ethical thinking: thinking that sees clearly and considers carefully, that judges generously yet scrupulously, that clearly yet tentatively asserts.

Honors Seminar

In the freshman Honors Seminar devised by the writer at Valdosta State University,, the course was envisioned as one that fostered these ambitious aims. Specifically, the course should balance the rigor of analysis and the exorbitance of creativity. It should alert students to the operation of what Blake calls "systems" while empowering them to resist those system's claims to universality. Finally, it should inculcate the values of the Socratic and later, scientific posture that Jacob Bronowski articulated in Science and Human Values--individuality, originality, dissent (62)--those liberties of thought and expression denied to Socrates, liberties inimical to the social projects of political ideologues. .

In this course, students are introduced to the rigor of analysis through a standard critical thinking textbook, Neil Browne and Stuart kelly's *Asking the Right Questions: A Guide to Critical Thinking*. This text was selected because it is brief, clear, and consistently recognizes that thinking is inseparable from language.

The first four weeks of the ten-week quarter were devoted to mastering the concepts presented in this text. Students began by identifying claims and classifying the kinds of issues they develop. The easiest to spot are claims of fact ("The American educational system favors the learning styles of men over women"). More challenging are claims of value ("Contemporary movies are not as good as movies from earlier years") and claims of policy ("Following a third conviction for a violent offense, criminals should be imprisoned for life without parole.")[1] Following this, practice was provided spotting the unwritten assumptions that underlie overt statements, weighing the strength and validity of evidence, and evaluating logic.

The writer has found it especially helpful to supplement this text with Stephen Toulmin's jurisprudential model for describing discourse and evaluating the validity of arguments. Following Toulmin's lead, students refine the traditional categories that Browne and Keeley present, discovering the ways in which statements are connected. In addition to claims, data and warrants, they also learn to identify restrictions and qualifying statements. This paradigm is particularly useful as an analytical tool because it not only alerts students to what an argument says but also to what an argument lacks. This first, analytical part of the course culminates in a written analysis of a selection from *Mein Kampf*, in which Hitler weaves a flimsy textual fabric out of bad science, suspect history, ad populum appeals, and ominous personifications of nature. If the exercise has no other value, it underscores the need for rigors analysis if we are to avoid the beguiling blandishments or skillful scapegoating of demagogues.

The last six weeks are devoted to creativity, the second, essential, component of critical thinking. The notion of creativity is introduced with the concepts of *heuristics*, a term derived from the Greek verb *heureskein*, to find. Every discipline, of course, has its own heuristics, processes that practitioners follow, from the "scientific method" to varying schools of literary criticism to protocols for anthropological inquiries or marketing surveys. The application of heuristics forces students to confront the idea of *systems*, encouraging them to recognize both their value and their limitations.

Heuristics

With the heuristic grid that Young, Becker, and Pike propose in *Rhetoric: Discovery and Change*, the idea of heuristics is presented. This heuristic is particularly valuable for an interdisciplinary seminar because it respects the simultaneously physical and linguistic qualities of the phenomena we think and talk about, the systems we devise. The three columns of this grid draw from contemporary physics, which recognizes that matter may be viewed, alternately, as particles, as waves, and as a parts of a field. (*Newton's Optics*, for example, taught that light was composed of particles; textbooks of the latter nineteenth century taught that light was wave motions; contemporary textbooks teach that light exhibits some of the properties of both waves and particles. In doing so, they underscore the presence of indeterminacy in the natural world or, perhaps, the inadequacy of language to express precisely what light is.) The three rows draw on tagmemic linguistics to focus on those elements of speech that confer meaning: sounds take on significance in contrast with other sounds, they maintain significance within certain rangers of variation, and they function significantly as they are distributed in predictable ways.

With a minimum of effort, students can be introduced to the idea that different perspectives--might, the writer say, different systems--yield different meanings through a simple application of the concepts of particle, wave, and field to familiar poems. Successively, the author views a single sonnet by John Donne--"Batte my heart, Three-personed God," through each of these lens. It may be read as a "particle," a closed system of verbal patterns that possess meaning insofar as they exhibit an identifiable order, possess distinctive tensions, achieve a significant balance. On the other hand, it may be read as a wave, discussing how it resembles or differs from other sonnets written earlier or later, functioning as an expression of the historical flow of Donne's life and work. Finally, discussed was the possibility of viewing the poem as part of the constellation of Donne's sequence of holy sonnets, a member of the even larger literary galaxy of Renaissance lyric poetry, or a member of still broader national or ideological contexts. With each shift in perspective, the poem's meaning changes.

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[1] I am indebted to Annette Rottenberg's Elements of Argument (3rd ed. Boston: Bedford/St. Martin's, 1991) for this tripartite division of claims as well as for the selection from Hitler's *Mein Kampf* that I refer to later.

The concept of varying perspectives, varying systems, receives greater resistance when one moves from the arts to the sciences, especially the natural sciences. Nurtured on the "scientific method" of observation, hypothesis, experimentation, verification, and restatement, most students here resist the notion of equally valid and competing systems. The writer challenges the notion that this process is the single heuristic for science with David Killeffer's *How Did You Think of That? An Introduction to the Scientific Method*, in which Killeffer follows John Dewey, Alfred North Whitehead, and others who describe a much more fluid process of inquiry that begins with an awareness of a problem, an effort to articulate the problem, preparation for solving the problem (which includes subconscious incubation and imaginative activity) followed by conscious verification and refinement.

The class follows Killeffer's text with a Bronowski's *Science and Human Values*, particularly useful because it reminds students that imaginative activity is, essentially, the perception of resemblances, the drawing of connections. (Hence the seductive appeal of Unified Field Theory, that would discover the connections between all of the natural sciences.) Even more importantly, perhaps, Bronowski reminds students that science is not, fundamentally, about data; it is about concepts. In his words, science is in fact a "system of concepts" (41). Thomas S. Kuhn's studies in the history of science further reinforce the idea that science is the battle ground, and the proving ground, for competing intellectual systems. While Kuhn's *The Structure of Scientific Revolutions* (1962) is too long and complicated for a freshman seminar, his essay "The Essential Tension: Tradition and Innovation in Scientific Research" provides a concise introduction and illustration of his insights. To further extend this crucial idea, the writer uses an article by Jeanine Czuberoff, a student of the rhetoric of the social sciences. In this analysis of the debate surrounding the competing paradigms for language study articulated in Noam Chomsky's *Syntactic Structures* and B. F. Skinner's *Verbal Behavior*, both published in 1957, she illustrates the extent to which the social sciences, like the natural ones, are primarily concerned with creating systems, not discovering facts. Her conclusions are the students' own: "Strategic scientific disputes are about cosmologies and metaphysics, about research methodologies and programs, about values and goals--issues for which no simple or singular answers are available" (45).

The course is concluded by having the students read and enter into a point-counterpoint exchange appearing in the April, 1992 issue of *Scientific American*. The first article, written by Allen C. Wilson and Rebecca L. Cann, is entitled "The Recent African Genesis of Humans"; the second, by Alan G. Thorne and Milford H. Wolpoff, is "The Multi-Regional Evolution of Humans." Neither is technically written, and in this exchange students can easily detect the competing systems that drive the debate. On the basis of genetic evidence, Wilson and Cann argue that all living humans descend from a single African woman who lived no more than 200,000 years ago. As they make their case, Wilson and Cann privilege the evidence of molecular biology because they believe it yields more reliable data than does paleontology. Because their science (read "system") focuses on "a set of characteristics that is complete and objective," "molecular biologists know the genes they are examining must have been passes through lineages that survived to the present; paleontologists cannot be sure that the fossils they examine do not lead down an evolutionary dead end" (68). Predictably, Thorne and Wolpoff argue for the superiority of paleontological evidence, asserting that the "African Eve" theory could not be correct because they find no archeological evidence that the postulated new peoples form Africa brought with them new any new cultures and technologies (76-77). That is, the "Eve" theory could not be true because it ignored the paleontological evidence that years of archeology has uncovered. Clearly, this debate about evidence is , in fact, a debate about systems. One's conclusions--at least in this point in the debate--depend upon which system she privileges, whether genetics or archeology.

Goals

The goal of this seminar is neither to create skepticism, nor to foster relativism, the refusal to systematize. Blake again is our guide; our goal is not only to reject all system, but, perhaps ultimately, to create our own. To reinforce the danger of abandoning existing systems, the seminar is closed by returning to Thomas Kuhn's article, "The Essential Tension," where he alerts students to the irony that the greatest advances in basic science occur when single theory or paradigm is dogmatically held by consensus. The scientific community advances from consensus to consensus; it does not thrive in an environment in which a multiplicity of paradigms--or systems-exist. The reasons are not hard to find. As individuals seek to extend the application of systems to which they are fully committed, they discover the perimeters of each system's applicability. Whereas the inventor benefits from willfully divergent thinking, basic science depends upon convergent thinking for its advances. The moral or the story? Systems must be firmly grasped, but lightly held.

In 1950, John Huizinga described our species as *homo ludens*--playful man. The products of our "play" are the systems that define, explain, shape, and create our culture. Critical thinking--another term for the forms of creative play that construct our world, is equally analytical and creative. It is never a simple heuristic, a list of positions to take or points to consider. Instead, at its highest level, it is thinking about systems, both examining and fashioning them. It is dialogic and often agonistic. It never occurs (or never occurs well) in a vacuum. We need to prepare all of our students, especially our better prepared and more motivated ones, to enter into the written dialogues of the academy. As students learn to read in a variety of registers and to exercise what Robert Scholes has called the rigor and exorbitance of reading, they will have accomplished the first step toward achieving this vision of critical thinking, a critical thinking that can inculcate a moral equilibrium that is personally and socially valuable.

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ARTS AND SCIENCE/SCHOOL OF EDUCATION: A COOPERATIVE APPROACH TO THE TEACHING OF INTRODUCTORY GEOGRAPHY

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Abstract

This project was begun to examine the effectiveness of cooperative learning at the college level. The professor of the introductory geography course in the School of Arts and Sciences taught one of his two classes in his traditional manner, i.e., lecture, multiple choice tests, etc. The second class was team taught with the social studies specialist from the Department of middle Grades Education, School of Education.

Introduction

At the start of the quarter, the team-taught class was given several inventories to determine their learning styles and hemisphericity. Based on this information plus their gender, this class was divided into groups of four. The method of presentation for this second class was modified so that it reflected the strengths of both the geography professor and the middle grades professor.

Following class-wide information sessions the students were given study questions, broken into their groups, and provided with class time to answer the questions. The tests for both groups were changed from only a multiple choice format to multiple choice and discussion questions.

The results of this study will be presented with recommendations for further work.

A complaint heard on many college campuses is that the faculties in the College of Arts and Sciences (A&S) and College of Education (ED) don't speak to each other. Much of this is derived from those in both camps who indicate that their colleagues: a) don't teach any content--the A&S complaint about those in Education; and b) don't incorporate current pedagogy, i.e. classes are taught in the lecture format -the ED complaint about those in A&S.

This study was begun to examine if the research pertaining to cooperative learning in the elementary and secondary sectors of public education (Slavin, 1988) could be of any value in the college classroom. The course, Introduction to Geography, was selected because the A&S instructor taught the course and the ED instructor was the social science specialist in the Department of Middle Grades Education. The course was an elective for any student in the University and may be used as partial fulfillment of the Social Science core requirement. In addition, those students in the College of Education who declare social studies as an area of concentration are encouraged to enroll in the course.

Background

In 1992, the Regents of the University System of the State of Georgia adopted their Plan for Change. This document specified that colleges and universities within the system increase the number of content courses within their teacher preparation programs. This mandate has led Valdosta State University to form committees comprised of faculty from the College of Arts and Science, Education, and public school teachers. These committees met and discussed approaches to improve the knowledge base of pre-service teachers.

At the outset, the thrust of the A&S faculty members on the committees was to add more courses in the various content areas, especially for those individuals who were preparing to teach in the middle grades and senior high schools. The ED faculty countered with a proposal to have new courses developed which would integrate the subject matter of various courses and present a more connected approach to the various content areas. This would provide the ED majors with the necessary content without jeopardizing pedagogy. The social sciences in particular came under close scrutiny with the spread of the content being divided over five distinct disciplines.

The Course

Introduction to Geography is an overview course designed to provide students with a cross-cultural awareness of the world. It incorporates all aspects that impact on geography, i.e. physical features, political features, culture, and climate to name just four. Prior to the current study, the format used for instruction in the class followed a lecture approach with limited opportunity for student input. When student input was encouraged it tended to be either Level I--Knowledge, or Level II--Comprehension, based on Bloom's Taxonomy (Bloom, 1976).

An added component of the class included map quizzes designed to provide the students with a knowledge of where and why places were located. The entire learning for this element of the course was the responsibility of the student. During the course of the academic quarter (10 weeks), the students were given seven lists containing places to be found on their maps in the various regions being studied. When the quizzes were given, they had to identify 25 places as selected by the instructor on a blank map. This portion of the course accounted for 25 percent of the student's course grade.

In addition to the map quizzes, the students were given three multiple choice tests and one final comprehensive examination with one short answer essay question. The multiple choice information was obtained through assigned textbook readings and the instructors lectures. The short answer essay question was of the Level II or III--Application Level (Bloom, 1976).

The Study

The course, Introduction to Geography was offered Monday through Friday during the Winter Quarter, 1993. One class was scheduled from 10 AM - 10:50 AM; the other class from 11 AM - 11:50 AM. It was decided that the method of investigation would follow the experimental model with a test/retest format. Because of instructor schedules, the 10 AM class was designated the control group, i.e., taught according to the traditional lecture method, only one instructor, multiple choice tests, and limited student involvement model. The 11 AM class was designated the experimental group, i.e., team taught by the two instructors. This class incorporated cooperative groups, presented students with questions ranging from Comprehension to Evaluation (Bloom, 1976).

Control Group

The control group did not notice any real difference in the way in which their class was taught. Students were not assigned seats, and since attendance was crucial (the instructor had a policy that after the 15th absence out of 50 possible classes a student automatically received a failing grade for the course), each session for both groups began with attendance being taken. Following the attendance, the instructor lectured on the material that was to be covered for that class. Although students were encouraged to participate through various questions presented by the instructor, the interaction was limited to only a few of the total number of students. In addition, this interaction was limited by structure of the questions to the Level I or Level II variety. The students in this group obtained the requisite knowledge by taking notes and reading the assignments in the textbook.

Experimental Group

This group had a different appearance in that both the A&S instructor and the ED instructor team taught the material. This took the form of professorial interaction during the introductions to the various units. On the second day of the quarter, each student in the experimental class was given a hemisphericity inventory (right brain/left brain) as well as a learning styles inventory. The data obtained from these surveys were matched with the students' gender to determine their placement into cooperative groups. The students were seated in the classroom according to their groupings which were changed three times during the quarter. This permitted the students to get to know others within the class as well as providing a balance for those members of the groups who were not carrying their weight. As the various units were studied, each group received the same set of questions for that particular unit and were given class time to work in groups on the answers.

Each unit was begun with an overview of the topic provided by the instructors who, rather than maintaining a strict lecture format, attempted to involve the students in discussions of the topics being studied through higher level questioning. Following the introduction, no more than two days in length, two days of class time was provided for the students to work in their groups as they answered the questions posed to them. These questions ranged from the identification of various terms necessary to gain a deeper understanding of the unit to Level V - synthesis, and Level VI - evaluation, types of questions (Bloom, 1976). During this work time the instructors served as resource people, moving from group to group, assisting as needed. These work days were followed by two to three days of group discussions on the questions examined by the groups and enhanced as needed by the instructors.

Testing of Both Groups

At the outset of the study, both groups were given a comprehensive examination on the material that was to be covered in the various units. This test included 50 multiple choice items and three essay questions to determine if the students gained insight into the subject matter during the quarter. This same test was administered on the last day of class held during the quarter, prior to the final examination.

A second area used to assess student knowledge was the three one-hour tests which were developed by pairing the units covered. The students were also given seven map quizzes which included the areas covered by the various units. Finally, the attendance record for both groups was tracked carefully.

Data Analysis

The collected data of the two groups were examined using the Statistical Package for the Social Sciences (SPSS). Variables which were examined included attendance, pre-test score, post-test score, major examination scores, and map quiz scores. In all cases, these variables were subjected to a t-test with a two-tail probability.

Results

Although none of the paired measures were statistically significant at the .05 level using a paired sample t-test, an examination of the pre-test/post-test mean provided interesting information. The pre-test mean for the control group was found to be 10.89 while the same measure for the experimental group yielded a score of 10.12. The post-test means for these two groups indicated that the control group's mean was 20.05 while the experimental group's was 20.40. A comparison of the means was conducted and found that although both groups showed improvement over the duration of the course, the experimental group showed an increase in their mean of 100.12% while the control group's increase amounted to 80.3%.

Discussion

The use of cooperative learning strategies within a class taught in the College of Arts and Sciences, although showing no significant difference over a similar class taught through the traditional lecture approach, did yield some interesting findings. Students participation in the experimental group was considerably higher due to the nature of the instructional method. In addition, attendance was more consistent in the experimental class than the control class. It may be speculated that this was because classmates depended on the individual's attendance to assist in finding answers to the various questions which were presented by the instructors.

It was also observed through the duration of the class that the A&S instructor had a tendency to infuse some of the material being discussed in the experimental group into the control group. This was noted by the observing instructor, however, this was noted after the fact and the contamination of the control group occurred.

Recommendations

If an experiment to determine the effectiveness of cooperative approach to learning versus the traditional lecture approach is to take place in the future, it is recommended that the following procedures be followed:

1. The teaching methods of each group be kept sterile, i.e. that the lecture group not be infused with information obtained from the cooperative group nor the cooperative group be infused with information from the lecture group;
2. That the two distinct parts of the tests which are given be examined separately, i.e. the multiple choice items from each group be compared with each other and the essay part from each group be compared with each other. This will present the researchers with information concerning applied knowledge of the students;

3. Obtain a larger "n." It was very difficult to find significance in a study of this type with class size as small as it was (mid 30s for both classes). With the difference in mean scores between the two groups in the pre-/post format, it seems logical to assume that a larger "n" would produce some level of significance in a future study; and
4. That each group in the experimental class be given a different set of questions. With each group receiving the same set of questions, a perceived impression was that some students did not participate as actively since they knew that their peers would have the answers for them; and
5. Cooperative learning techniques can be applied to the college classroom. In addition to the comparison of the means mentioned above, indications were that student attendance improved and that student participation increased. It must be noted, however, that the methods used in this study involved an examination of the student's learning style, hemisphericity, and gender; not only having students sit together in groups to answer questions.

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VISIONS MANAGEMENT
EFFECTIVE TEACHING THROUGH TECHNOLOGY

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Abstract

This paper will research and analyze the ramifications of incorporating the uses of several new technologies for college teaching in the 21st century. For example, it will discuss how the use of video tapes, an excellent medium for providing information for today's classroom instruction, is not always precise enough from a time management or a classroom management standpoint for complete classroom efficiency. Included in the paper will be an analysis of the potentials for such devices as erasable video discs, laser videos under computerized control and the digitation of print,, image and sound.

Statement of Purpose

The purpose of this paper is to present a position--or a hypothesis-that college teachers/professors be more visually oriented than they have demonstrated in the past and be more current in media technologies as well as becoming an advocate for continued improvements in the field of education.

The title: Visions Management--Effective Teaching Through Technology was selected because it connotes the difficult challenges that college educators will face as education embarks into the 21st century.

The first challenge that each of us must meet is the incorporation of a personal vision: such as asking ourselves what really is important and necessary for effective college teaching? The second challenge is how can we manage our individual or department resources to budget for these challenges?

A breakdown of the first two words of this paper may appear to be a paradox. Actually, this is far from the case. A vision, according to Webster is "an act or power of Imagination." Its related word "visionary" suggests that one who is visionary is actually a dreamer, someone whose ideas or projects are impractical or who lives in a world of fantasy and imagination. Third negative connotation (applicable to this definition) is that a visionary is someone who has ideas or conceives of impracticable projects.

On the other hand, the word "management" suggests a judicious use of means to accomplish an end.
By putting the two words together, hopefully, you, as the reader, will consider a philosophy of teaching methodologies which orchestrates continued education, a dedicated effort, imagination and judicious use of time and money to improve your teaching.

The Problem

The problem, as this writer views it, is that many instructors do not take full advantage of visual aid technology today, let alone be prepared for the future. Also, are we, as college instructors, becoming cognizant of these future changes in technology as they pertain to successful college teaching?
Major Trends in Communications Technology: Three major trends in communications technology have emerged, actually paralleling each other during the past 50 years:

1) miniaturization of the media of communication,
2) multiplication of electronic delivery, and
3) convergence of media delivery systems

While all three of the trends will be discussed, this paper will highlight the new technologies regarding the convergence of instructional media and will present a program or a checklist of considerations on how to convert these technologies to various disciplines or subjects.

Discussed will be uses of the interactive video systems and the impact on teaching methodologies. Included will be the uses of video tapes, video disc, digitization of print, image and sound and other laser-related systems. as it pertains to various subjects or disciplines.

Miniaturization: What Is It?

Perhaps, the most important technological trend affecting instructional media has been the miniaturization of media equipment.

For example, this researcher recalls receiving a portable radio for a high school graduation present that was considered the "state of the art" for portability. The radio measured 8" x 10" x 4" inches. and contained a battery twice the size of today's portable radios. Several years later, as a young Marine undergoing electronics training at Memphis, Tennessee, he recalls that the idea of transistor radios and printed circuits was merely a theory. Even fifteen years later (in the mid 1970s) the concept of developing a tape player and a slide projector to fit into a unit the size of a typical suitcase was innovative. While the two of us accomplished the feat, our director, Dr. Arthur Olson, the Director of the Cooperative Accountability Project, (Colorado Department of Education), experienced some difficulty in carrying the 25-pound suitcase from airport to airport.

Today, 16mm film projectors, audiocassette recorders and players, video recorders, and computers all are much smaller in size and could fit into the suitcase with ease.

Probably, the most striking example of miniaturization has occurred in computers. Computers, at one time, were about the size of a typical professor's office (10 ft. x 10 ft.). Due to advances in microchip technology, computers are now comparable in size to television sets and incur about the same amount of expenditures.

The educational importance of this development is that the use of computer technology for instructional purposes becomes logistically and economically feasible.

The degree of miniaturization that has evolved in the realm of micro-processors is also mind boggling. The wiring in the integrated circuits of the pre-1980 era could be inspected with the naked eye. The following generation of integrated circuits required a magnifying glass. Next, were the tiny integrated circuits etched in silicon using optical lithography or electron beams under a microscope. Recently, tiny biological microprocessors of protein or "biochips" were formed. The biochips are measured in the range of 10 to 25 nonometer (a nonometer is one-billionth of a meter).

A recent speech by John S. Mayo, president of AT&T Bell Laboratories points out the difference in the state of the art. He indicates, "One measure of microelectronics progress toward increasing power is the number of components that we the technicians at AT&T Bell can cram into a silicon chip the size of the fingernail." "The number is doubling every 18 months." he continues.

"That trend will have matured by 2010, with chips containing up to a billion components for highly packed circuits such as memory. For typical custom logic circuit that range should be in the 100 million to 1 billion components region."

The main problem, according to Mayo, is one of economics, since the chips would cost $1 to 10 billion dollars.

Multiplication of Electronic Delivery Systems

Another technological innovation with its impact on education is the multiplication of electronic delivery systems. Today, we have instruction via open broadcasts by radio and television stations, microwave systems, satellite and close-circuit systems (such as cable television) and the telephone.

Although instruction via open broadcast by radio and television is significant, there is also a trend toward closed distribution systems-microwave, closed-circuit, satellite. Unlike open systems these have the advantage of being able to transmit a number of instructional programs simultaneously.

Satellite systems can also increase the range of the instruction because signals can be transmitted to any spot on earth and can be carried by cable and/or microwave systems to any instructional area, thus eliminating the need for redistribution by cable. Satellite systems can be received and transmitted via telephones equipped with optical fibers capable of transmitting thousands of messages simultaneously.

Interactive Video Systems

As previously stated, the major emphasis of this paper was to focus on interactive video systems and laser technology; interactive video systems is a multi-media system.

The term multi-media refer to information that combine more than one medium, where the media can include speech, music, text, data, graphics, fax image, video and animation. The systems are integrated and are commonly controlled or synchronized.

A recent Public Service Network presentation of the Civil War demonstrated how a sophisticated, integrated and creative endeavor can produce realistic and entertaining results.

To enable the system operation, the interactive video system requires the following components:

a) television monitor
b) videodisc or a video tape player
c) computer
d) interface device
e) disc drive

The "heart" and the "brains" of the interactive video system is the computer and "arms and the legs" or the brawn is the video disc player. Computers provide powerful decision-making capabilities which video players lack. Computers also provide the intelligence required for the interactive video to operate. Combining these technologies establishes the strengths of each, compensating for the limitations of the other and providing a proper learning environment for students.

The computer storage system is usually a small disc, which may hold the instructional program and store other information.

The video player presents the visual and audio information and in a variety of forms and has a tremendous possibility for learning and **creativity** (to be explained later).

The monitor is used to display the video signal and sound from the video player. It provides output from the computer program, usually in the form of printed verbal information, but graphics and sound are also possible. Some videodisc players, which are available today have the memory and input devices built into them.

The last element of the interactive video system is the interface device. It provides the link between the computer and the video player, allowing the computer to communicate with the video player. Through this device, the computer can control which portion of the video is presented to the learner.

n the area of instruction, interactive video features programmed instruction and computer-assisted information to achieve effective and efficient learning. This capability provides the viewers not only with sight and sounds but the option of responding and controlling the pace of the program.

Operations: The computer commands the video player to present the audio and/or video information from the video tape or video disc and wait for the learner's response. After the response is analyzed by the computer, it suggests an appropriate point in the programmed instruction. The responses can be made by touch, light pen, keywords or by "mousing" (using the mouse) the information requested. The images can be presented in slow motion, fast motion, frame by frame or a single frame-equivalent to slides or filmstrips.

Programmed instruction is another application. The use of programmed instruction in the past was an approach for a superior student to avoid reading an entire textbook or an instructional booklet. For example, if one were successful in answering 8 of 10 questions pertaining to a certain subject, one could eliminate reading or re-reading various chapters in the book. On the other hand, if one had difficulties grasping a certain subject, one could read, re-read or review those deficient chapters.

One of the major advantages of interactive video is that it requires learner response. By requiring frequent response, the interactive video system captures attention and, in some cases, a menu can be offered for the various types of students.

In accordance with a recent research study, students using interactive video not only learn faster and retain the information longer but learning takes 30 to 35 percent less time than other methods.

Recently two other studies endorsed the use of television and interactive video systems as a significant teaching tool in the nation's classrooms. Key finding pointed out:

1. Students learn more and had a higher interest in the subject materials with interactive video systems (ITV) in place.
2. Students exposed to ITV showed four times more improvement than the control groups on test scores.
3. Students displayed more ingenuity and innovation on assignments and their writings were more creative and descriptive.
4. Students were more confident and enthusiastic in class.

Video tapes and video discs

Initially, many instructional users preferred video tapes. The reason: they wanted a system in which they could record their own programs well as playback mass distributed programs Until technology creates a suitable erasable video disc (which this presenter predicts will happen in the 21st century), video tapes may dominate the market for the cost-conscious instructor. However, this concept could be changed, not by technology, but by law enforcement.

According to Warren Deatherage, Director of the Tape Laboratory at Pittsburgh State University (Kansas), "if states enforced the laws regarding video taping (only 30 days usage for educational purposes in some states), there could be a re-thinking about the use of video tapes.

In addition, video tapes, eventually wear out, lose quality and twist or break in the machine during operation, especially if there a significant amount of fast-forwarding and rewinding.

Video discs actually offer more promise for the future than video tapes. Video discs are generally 12 inches in diameter and can hold up to 100,000 frames of information. Each frame represents one slide.

Two different formats are used to store pictures.

1. CAV format (Constant Angular Velocity)
2. CLV format Constant Linear Velocity)

Which format should you use? It depends upon your application. The CAV format has the advantage of "stop and go" action. Pictures are stored in concentric circles that are read with a laser beam. While changes can occur within the program, pictures or frames once programmed on the videodisc cannot be changed.

The significance of this application is important for teachers since each frame has its own number so that the programmer can call up on the monitor any number or any combination of numbers he or she chooses. (The process is as easy as working your remote for your television at home). Furthermore, the instructor has the capability of varying the speed--twice the speed, one-half the speed, one quarter the speed, etc.

How can this technology be applied to your instruction? It depends, of course, on teaching methodologies and the subject matter being taught. This system has the capability to assist in analyzing skills or in breaking down segments for instructional purposes. Consider how beneficial it would be for a coach to analyze the application to athletic feats utilizing this system pole vaulting fourteen feet, hitting a baseball at 90 miles per hour and executing a high dive off the diving board are direct examples.

As a professor of advertising, one could use the capability of the interactive video system to compare Coca Cola ads with Pepsi Cola ads. In an upcoming Super Bowl, classify various types of advertisements drink in a specific program (product, public service announcements or public relations advertisements) or analyze ads according to numerous other categories.

The CLV format while it holds more pictures or frames (100,00 vs. 54,000) loses many of the best features of the videodisc such as still frame, step frame, multi-speed and frame speed modes. This format is usually used to play movies and other programs that are produced to be linear.

Another feature of the two systems is that the audio is stored in two different tracks. This option provides the possibility of having two different languages for the same program.

To aid the instructor, videodisc activities can be divided into three levels.

Level one--The Level One videodisc system adds a massive storage capacity for motion pictures. At this level, the videodisc player is controlled with the aid of a remote control panel for Stop, Start and Scan features. The hardware components consist of CLV laserdiscs, a laser player with remote control and a TV monitor.

Level Two--The Level Two videodisc system is the same as Level One but has one additional feature--a player with a built-in programmable capability. This capability can result in students being able to interact with the video presentation by using a remote control panel for searching chaptersand lessons in any combination or sequence.

Level Three--The Level Three video system is a computer-assisted learning approach suitable for inter-activity. By using this system, it is possible to design videodisc-based software with computers that can be used for individual instruction. The hardware components consist of a laser player with a computer interface, a television monitor, a microcomputer and an authoring system (software) for designing interative lessons.

Creating Laserdisc Programs

With the use of one of several video tool kits on the market, college instructors can easily author their own programs.

The authoring software allows one to integrate on the computer screen graphics and text with interactive video and sound from the laser player. As the student moves through the content material, the laserdisc cues that one builds into the presentation automatically shows the student video clips and still illustrations. Then, one searches out the video sequence wanted from the disc with a standard Play, Fast Forward, Reserve and Stop buttons very similar to those on the remote control of the home video cassette player.

After the instructions has located the beginning of the video sequence, then it should be marked exactly where one wants the video clip to end. The toolkit then automatically makes a button that will play back the chosen piece of video whenever the button is clicked. Copy that video button to one's own program and students will view that video clip or still frame whenever they click on the button.

Most educational authoring tools such as HyperCard, SuperCard, Course of Action, Course Builder, Macromedia Authorware and VideoToolkit, either have laserdisc control facilities built into the program to allow the inventor to easily add on laserdisc capability. Typically, these authoring programs help one to control the laserdisc player via easily understood commands such as "Video play," "Sound on," or "Video stop." These controllers support the most common players used in interactive video.

While this paper has previously discussed how the laserdisc centers around student needs, this capability also holds true for instructors who need to author an integrated program.

Thus, any laserdisc can be redefined in any order one selects. This ability to repurpose a video disc, by the way, is crucial to making interactive video a classroom reality, because most educational budgets do not have the funding to produce too many unique laserdiscs. (Presently, the cost ranges between $300 to $500 per laserdisc).

Digitization of Print, Image and Sound

Many may have experienced digitized images in the late 1960s if one watches the televised close-up pictures of the Moon sent back to Earth by U.S. astronauts. The images from their video cameras were converted into a digital code--a series of 1s and 0s. The digitized information was transmitted back to Earth, where it was converted back into recognizable pictures.

Digitized images and laser technology, of course, were responsible for the making of videodiscs. This digitized information has numerous advantages. In stored formats such as the videodisc and compact disc, information can be scanned and accessed with a speed and accuracy not possible in analog formats. Certainly tape or film does not have the capability. In addition, videodiscs and compact discs can store more information than the analog formats. Finally, digitized still and motion images can be intermixed with a degree of manipulation not possible in film or tape.

Transmission of digitized information is less cumbersome than transmission of analog films. Analog sound and image must be transmitted on separate wires, but digitized sound and image can be sent over the same line. An optical fiber, about the thickness of a thread, can transmit vast amounts of information.

Digitation has to a number of systems for storage retrieval and transmission of information and will make older forms of media obsolete. For example, if still and motion pictures can be combined on one disc and the same piece of equipment can display both, why utilize filmstrips and 16-mm projectors? If laserdiscs are damage resistant and can store still and motion images, why maintain an inventory of fragile filmstrips and films ?

Following are some of the more popular units:

1. CD-ROM (Read Only Memory. By being plugged into a word processor, a dictionary, thesaurus, zip code directory and other references publications, the user has immediate access to important references.
2. CD-WORM (Read Once, Read Many Times). This format attempts to get around the read only memory limitation of CD-ROM. The disc can be inscribed with the user's choice of information. This is a useful format for those with a unique data bank that must be read often.
3. CD-I (Interactive) Verbal images, still images, graphics and computer software are incorporated into this format.
4. DVI (Digital Video Interactive). This format combines the features of CD-I with the added features of moving images.
5. Hypertext--This format combines, text, graphics, voices and other sounds to put the listener into a "you are there" mode.

Other Laser Devices

Another laser device in use is the laser beam. This item resembles a small flashlight but provides a fine ray of light for emphasizing certain parts or features of an audiovisual presentation.

Summary and Recommendations

This paper has described or summarized some of the new technologies for improving college teaching. They were:

1. The miniaturization of the media of communication
2. Multiplication of electronic delivery systems and
3. Convergence of media delivery.systems emphasizing the various ways to utilize interactive video systems.

While the information compiled is not complete or new but a summary of secondary information, this author considers it important to make specific suggestions or recommendations on how to become a better "visions-oriented" college instructor for the 21st century classroom.

To accomplish this endeavor, twelve key suggestions have been formulated. They are called:

Twelve Ways for Better Visions Management

1. Keep up to date with the latest technologies about educational media.
2. Plan the curriculum and analyze elements of the curriculum that need more explanation, more motivation or can be broken down into "segments of learning."
3. Become computer literate so that one can develop appropriate graphics and other information.
4. Build a file of still photos, photographs, artwork, and magazine and newspaper articles. Remembering that there are 54,000 to 100,000 frames to fill.
5. Develop a sound system library through audio tapes, etc.
6. Pursue one's audio video or multi-media departments for interactive video equipment and other necessary equipment.
7. Budget some personal funds for interactive video equipment
8. Develop a list of audio/video and laserdisc suppliers.
9. Develop alternative models for using IVS. Experiment with student reaction.
10. Seek excellence not perfection with the visual arts. It isn't necessary to have a staff of artists found in the motion picture and television industries.
11. Search for new ways to classify or reclassify your frames. It's just one click away.
12. Remember 20 years from now, everything included in this report will be obsolete.

In summary, by doing all of this, the reader will have gained more additional knowledge and students will have benefited from the results.

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REJUVENATING INSTRUCTION THROUGH DEVELOPMENT OF AN APPLIED LAB FOR SOCIOLOGY STUDENTS

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Abstract

Faculty and students have experienced a rejuvenation of enthusiasm in the sociology courses through their experiences in CASI. CASI, The Center of Applied Social Issues, consists of computer applications, audio-visual, and tabletop activities which extends classroom knowledge, reinforces basic knowledge, fosters critical thinking, and permits exploration of advanced ideas. CASI currently contains over 90 different activities which faculty have authored or adapted.

Introduction

CASI, The Center for Applied Social Issues, is an interactive environment for sociology students at Sinclair Community College in Dayton, Ohio. CASI is a unique forum for the engagement of the educational process because it provides opportunities for students to actively be a partner in learning sociological principles. CASI provides hands-on, course-integrated opportunities for students enrolled in all of our sociology course offerings.

The areas of experiential and nontraditional learning challenges all educators today. Students come to us with an array of learning styles, experiences, academic and career goals, abilities, and level of competencies. All of these are furthered by what they actively do. Engaging students as active participants in their learning process so that they can take a leading role in their education has been a long desired outcome of sociological education. The Sociology Department at Sinclair Community College has listened carefully to students and the experts who guide sociological education and created CASI as a vehicle to successfully meet all the learning needs of freshman and sophomore students. A participatory experience is designed which engages students beyond the traditional classroom format so that all students, regardless of their backgrounds, abilities, competencies, or goals can practice sociology.

Sociology is a science, using the scientific method. Because students retain new knowledge best by discovery and participation, a vehicle to foster the process of learning, using, and applying science needed to be part of a sociology student's beginning experiences. CASI is the means by which we empower students and faculty with the opportunities to take part in the process of engagement, participation, and application of science. CASI provides students of every major with the benefit of increased involvement with the subject matter of sociology which they will use all during their work and personal lives. Faculty have an opportunity to expand their skills and abilities by participation in CASI Activities.

History of CASI

In March of 1990 Dr. Steven Steele and Dr. Joseph Lamp from the Center for the Study of Local Issues at Anne Arundel Community College came to sinclair to give a seminar entitled, "The Teaching of Sociological Applications to Undergraduates and Selling it to the Administration. Dr.'s Steele and Lamp were selected because they have had close to a decade of successful experience with freshman and sophomore students carrying out research at their community college. After the conference, we determined that having a research opportunity for students combined with that of an interactive lab would be the kind of learning experience we desired at Sinclair for the student population.

Interactive, hands-on lab experiences have a history at Sinclair. The Psychology Department has a Demonstration Lab, the English Department has a Writing Center, the Physics Department developed a lab, and the Math Department has a Learning Lab. Other community colleges across the country have freshmen and sophomore students doing applied sociological research successfully and it was our desire to combine an interactive lab with student-driven research.

In the Spring of 1990 we submitted the proposal for CASI to the Liberal Arts and Sciences dean. The Dean was very supportive and he guided the proposal through the administrative bureaucracy so that the proposal was approved and funded. The writers then set about during the Fall and Winter quarters of 1990-91 ordering and receiving the necessary hardware, software, furniture, storage, and other items we necessary to operate. The Dean found a room and the authors met with the College's interior designer to satisfy architectural requirements.

Unexpectedly, Sinclair's Provost decided that the student-driven research aspect of CASI would not go forward, and the permission to implement this component of CASI was halted. However, plans continued to develop an interactive lab and opened the Fall of 1992.

One year after opening 106 Activities have been developed by faculty which span video, computer, audio, and tabletop experiences. Also, the writers are in the process of obtaining multimedia work stations, laserdisk Activities, and developing multimedia presentations which will reinforce and enhance classroom materials. At present, CASI is not large enough to accommodate an entire class of thirty students at one time, but usually an upper limit of approximately twenty-seven students has been set to work on a variety of Activities using CASI at any one time. The writer's typically average fifty to eight-eight students for the forty-five hours per week that CASI is open. Saturday hours and two evenings are included to reach students who are enrolled exclusively in evenings courses or who have hectic work and class schedules and can come only on Saturdays.

For the convenience of full and part-time instructors, the authors maintain a CASI Faculty Handbook which contains information about the functioning of CASI and the rules for operation. Files are kept of existing Activities in the Departmental office so that instructors can check on newly developed Activities or on specific Activities that fit with individual needs. Each Activity has been annotated so that a listing is available within CASI for students with appropriate color coding so students know which Activities correspond to a given course. This descriptive listing also is available within the Departmental office for ease of access of instructors.

What CASI Does for the Student

CASI functions to provide students with a guided forum for personal discovery as they learn basic sociology. Students are able to move at their own pace and repeat the acquisition of new information as often as necessary. CASI has been designed to permit students to supplement their classroom instruction, to explore issues and ideas that time does not permit within the classroom, and to further the mission of Sinclair Community College.

The objectives CASI meets for students includes:

1. To enhance student computer experiences through use and application of actual data bases and simulations.
2. To prepare students for the changing expectations of local four-year universities.
3. To allow students the opportunity to apply classroom gained skills to computer simulations and other activities.
4. To foster and reinforce critical thinking and writing skills.
5. To extend classroom knowledge through application and analysis of current social issues and social problems.
6. To permit students to practice basic research skills through simulations and guided exercises.
7. To have students apply theories to a variety of social situations which they might encounter in professional or personal capacities.
8. To reinforce global awareness on the part of every sociology students.

9. To enable students of varying learning styles a forum within which they can add to their understanding of sociology.

The variety of Activities currently in place affords students considerable choice in directing their learning. All Activities are self-paced and students may return to work on a given Activity if more time is needed than was anticipated. The authors particularly wanted students to be able to take a proactive, positive approach to the Activities offered so that students with diverse backgrounds, interests, strengths, experiences, and abilities could move through sociology in a manner designed to challenge, excite, and strengthen. As a result, the writers feel confident that the students learn by being active participants in the process of acquiring a sociological education. Students practice, repeat, explore, investigate, and learn sociology through as many interactive mediums as we can provide. A concerted effort has been made to foster an environment which is challenging without being threatening. Students objectives were composed with the assumption that the most fragile student could take the course and be offered a meaningful and involved educational experience.

What CASI Does for the Instructor

Instructors who use CASI have been impressed with the excitement students have for the subject matter of sociology. Students initiate more questions which are reflective of critical thought than they have before and we have noticed that they bring a greater depth of understanding to their classes. In turn, instructors have been extremely pleased by the positive experiences students continually have within CASI. Instructors now are able to better realize departmental outcomes and the college mission by exposing students to situations and media that are unavailable or unmanageable within a classroom setting. Because some of the reinforcement and repetition of material is available in CASI, instructors have found that they are free to concentrate on additional information that prior to the opening of CASI was beyond the limits of our eleven week quarter. With instructional time saved, additional avenues of creativity have been opened within the classroom as students come to classes with greater depths of understanding. The excitement of the lab is reflected in the atmosphere of the class.

Instructors have commented that they are thrust into the role of "coach" or "guide" rather than that of an authority who is present to spout the "truth" of sociology. This is an ideal role for the instructors who are interested in students assuming responsibility for their educational process. The authors have an increased ability to work individually with students as they move through their assignments which has delighted both students and faculty.

Additionally, instructors who wish to develop Activities around particular themes, theories, methodologies, skills, or issues are encouraged to do so. In the process, syllabi have been reconstructed, courses have been rethought, and we have had the opportunity to be as creative as our technology will permit us to be in the development of new opportunities in CASI.

How CASI Operates

Since it is the intent of the authors to make CASI as accessible as possible to students who often hurry off campus to jobs and families, the lab is open during the day, evenings, and for a few hours on Saturdays. If the College moves toward course offerings on Sundays, the schedule will be adjusted to meet the needs of students who may be commuting to Sinclair for those classes.

CASI is continually staffed by student workers who have completed the introductory sequence with superior grades and who then undergo an interview. It is important for the image the authors wish to create via CASI that student workers understand and appreciate the professional, supportive atmosphere desired. As a result, professional dress and demeanor are stressed during the interview. Also shared are the expectations for the various record-keeping duties the lab entails and the requirements that all student workers complete each Activity that is available. If a student believes that s/he can effectively represent the Sociology Department and expresses a willingness to assist students, the paperwork is processed for student employment. Each student worker attends an orientation and engages in role playing to better prepare for a variety of situations which may arise in running the lab. The students hired to date, have been remarkably responsible and responsive to CASI. They have handled delicate situations with sensitivity and maturity and, in turn, we support their efforts with guidance and encouragement. Indeed, faculty have been able to mentor potential majors and have developed close relationships with our student workers. Much of the success enjoyed with CASI has been due to their smooth handling of the day-to-day functions of the lab.

When a student enters CASI, s/he fills out a form which provides information to track lab usage and serves as a mechanism for regulating the flow of students in and out of the room. All students must furnish a student identification card with a current validation sticker. Students select the Activity they desire by reading a wall chart which contains an annotated listing of all Activities with colored designations which refer to specific courses. Unless an instructor specifically has required a particular Activity, students then can question the CASI Assistant (student worker) further about individual Activities. The CASI Assistant furnishes the Activity, provides any charts or reading materials, and assists the student with any explanations needed about equipment use.

Provided are a dictionary, wall charts indicating basic rules for using the facility, the parameters of the sociological perspective, and the opportunity to return at a later time if the Activity does not get completed. Students are on their own for answering questions within Activities, although the CASI Assistant will assist with some very basic content questions.

When a student completes an Activity, it is returned to the CASI Assistant who records the time of completion. At the close of the lab for the day, Activities are sorted according to instructor name and distributed to individual instructor mailboxes. A copy of the student's sign-in sheet is attached to each student's completed Activity.

There are a variety of ways instructors use CASI. Primarily, instructors have been using the lab for required or extra credit Activities in the following courses:

*Introductory Sociology
*Social Problems
*Criminology
*Juvenile Delinquency
*Cultural Anthropology
*Race and Ethnic Relations
*Human Sexuality
*Introduction to Social Welfare
*Marriage and the Family

Instructors may require a minimum number of Activities for students to complete within a given quarter, offer students extra credit for a set amount of participation, or invite students to visit the facility to explore an area of interest. Typically, students return to CASI because they are interested in the interactive component of learning sociology; indeed, students complete Activities even when there is no course credit to be had.

No student pays lab fees to use CASI. The budget for the lab initially was combined with other Liberal Arts and Sciences labs and administered by a coordinator. When that position was eliminated, budgeting reverted to individual departments. Five hours release time each quarter is granted to the faculty member who administers the lab, hires and supervises student workers, administers an evaluation, and plans the budget. Faculty develop new Activities because of their interest in the facility and instruction. Computers, video equipment, storage, and other materials have also been added as needed.

An important aspect of budgeting for CASI involves the development of the Center so that we can continue to keep abreast of the release of new software programs or the marketing of new equipment. New techniques or technologies are incorporated so that students can be provided with a state-of-the-art facility. As a result, CASI is involved in a continuous process of revision of Activities, plans for future trends, and development of resources.

SEEDS AND SEARCHES: THE WRITING PROCESS IN HIGHER EDUCATION

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Abstract

By employing Charles Sandler's Pierce's Theory of Logic as the philosophical foundation, this presentation will explore the utilization of the writing process in the higher education setting. The paper reviews the philosophical nature of the writing process and provides examples of student creativity which have been stimulated by the use of reflective SEED papers and Ken Macrorie's I-Search papers. These papers are vehicles which encourage higher education students to write, to engage in research, and to attain personal satisfaction and meaning through writing. They have also made excellent motivational tools.

Introduction

Through the use of Papers - Reflective SEED and an adaptation of Ken Macrorie's I-Search Paper (1980), the writer has attempted to integrate the writing process into a higher education classroom. These two types of papers have allowed undergraduate and graduate education students to reflect on their knowledge and experiences, to gain meaning from these higher educational experiences and to forge connections between the "real world" which exist beyond the on-campus classrooms and textbook environment.

Both the SEED Paper and the I-Search Paper are outgrowths of the writing process philosophy which emerged as an educational paradigm during the 1970's. This paradigm suggests that the emphasis of teaching writing as well as teaching itself should be more concerned with the process of producing the product than the final product itself (Gebhardt, 1981). Philosophical assumptions which underlie this orientation are diametrically opposed to the traditional method of imparting knowledge through the use of textbooks and workbooks. According to the process orientation, this type of learning assumes that (a) learners come to know their world by actively constructing it rather than by its passive acceptance, (b) knowledge of the whole reveals knowledge of the parts, and (c) learning cannot be divorced from context. Writing, which is constructive in nature, begins with writers who "need to get something done with language" (Shuy, 1981, p.102). Thus, the process approach requires that learners' personal goals drive their writing and that the learners must be given opportunities to broaden their repertoire of situations in which language is used (Applebee, 1986).

When writing is constructively conceptualized, the roles of teachers, students, and the teaching materials are greatly altered. Teachers don't solely evaluate the learner's knowledge but also must actively collaborate as their students construct knowledge. The subject matter, is not only found within the textbook but also in those areas which mean something to the learner such as:

> firsthand content [from] feelings, fantasies, sensations, memories, and reflections, and second hand contents drawn form interviews, stored information, and the writings of others to the extent that the [writers]...re-abstract these in their own synthesis (Moffet, 1981, p.76).

Research has also suggested that the writing process is composed of a series of stages, and during the act of writing the writer constructs knowledge by moving back and forth between the stages of pre-writing, drafting, and revision (Elbow, 1973; Emig, 1971; Flower and Hayes; 1981; and Graves, 1983).

Although researchers tend to disagree as to the number of components in the writing process, most do agree that the writing process has three distinct stages: prewriting, writing or drafting, and rewriting or revision (Holdzkom, Reed, Porter, and Rubin, 1982).

During prewriting the writer topic is conceptualized. It is at this stage that the writer informally plans how a topic will be approached. Holdzkom et al. (1982), have suggested that during this stage the writer rehearses; a process by which the writer begins to gain control of the topic which will help to compose the first draft. Because writers approach writing tasks differently, there are many avenues which writers take in order to generate their ideas. Some of those avenues might include talking about the idea to one's peers, reading and reflecting on the topic, doing library research, generating outlines, or sitting on the porch swing and allowing ideas to percolate. Prewriting can be as short as five minutes or as long as a month or longer.

For the writer, the goal of the first draft is to get one's ideas down on paper. Usually written as fast as possible, with or without notes, drafting is the process the writer uses to find out what is known about a topic. The writing may be free flowing or may follow an outline, but during drafting little attention is paid to spelling, grammar, word usage, or mechanics.

During rewriting/revision the writer develops through definition, description, and documentation, as fully as possible, each point which was made during drafting (Busching, 1989). The writer may clarify the text so that the meaning is made clear to the reader. The writer may make one or two simple changes, may rearrange sentences within a paragraph, may remove paragraphs or pages which cloud meaning, or may completely reorganize the entire piece and write a different draft altogether. If meaning proves satisfactory, the writer then checks the piece for grammatical, spelling, or mechanical errors. The final step during rewriting involves publication. In the classroom, publication may be as simple as reading one's piece to a peer, posting it on a bulletin board, or submitting it to a literary magazine.

The above stages describe the writing process but a final note must be added here. Writing is a recursive process. The writer may constantly move back and forth between the stages, may spend very little time in one stage or may skip a stage completely. After rewriting, the writer may discover a new thread of meaning to follow and rework the entire piece and then discover something new again. Thus, a piece of writing may never reach its final draft because something new can always loom on the horizon.

Reflective Seed Papers

A SEED Paper is a seed for thought. Typically, each of the ten SEED Papers which students submit during the course of a semester are at least one but not more than two double spaced pages in length. Similar to a writer's first draft, a SEED Paper allows writers to get their ideas down on paper as quickly as possible and, if the meaning is not clouded, students are not required to edit their SEED papers for spelling, grammar, word usage, or mechanical errors.

Although many students have been at first reluctant to write SEED Papers, many quickly learn that a SEED Paper can be written in as little as five minutes and can cover a wide range of topics. In the past year and one-half that the author has required SEEDS, the papers have contained summaries of the material covered in class or they have been written on any topic of student interest. For example, the breadth of topics from recent student SEED Papers include comments on the behavior of sixth grade students, Black History Month, the rising crime rate, segregation, the purpose of golf, Valentine's Day, and the importance of education in society.

Each SEED Paper submitted automatically receives a score of two points. After SEED Papers are read, comments are frequently written in the margins before the SEEDS are returned to the students. These responses serve many purposes. Since the primary focus of this instructional in educational foundations is to enable students to examine the assumptions which underlie their educational convictions, the instructor's comments may push students to clarify and support any irrational or underdeveloped beliefs. In addition, these comments often stimulate informal dialogues which lessen the pedagogical distance between the instructor and the students. Occasionally, the instructor informally publishes a student's SEED Paper by reading it aloud at the beginning of the next class. In this way, many SEED Papers have made wonderful springboards for class discussions. Finally, and perhaps most importantly, it is believed that the instructor's responses lead the students to discern that a genuine concern exists for those topics which are of personal interest to the students.

Student Responses to SEED Papers

As noted earlier, many students have been hesitant to write SEED Papers during the first few weeks of class. This reluctance may be attributed to students' lack of confidence in their ability to write as well as an indecisiveness on topic selection. However, as writing process research has demonstrated, individuals can become better writers if they are given opportunity to frequently practice their writing. In essence, SEED Papers can give students this opportunity to practice writing.

Occasionally, after students realize that anything is a legitimate topic for a SEED Paper, students will comment about the benefits they have received while writing SEEDS. For example, one student indicated that writing SEED Papers allowed her the opportunity to think for herself. She wrote:

> Actually, I appreciate the SEED Paper. It gives me a chance to think on my own and to not just [listen] to a lot of instructions....it requires thought on what I think not [the thoughts] on someone else (Allen, 1993).

In a similar vein, another student remarked that SEED Papers provided her with the opportunity to privately chat with the professor on topics which time didn't afford her during a 50 minute class period.

> Even though I never expressed my feelings in class, I used the [SEED Papers] to get my ideas across, so you, as the professor could understand my views (Wilson, 1993).

An excerpt from a third student reiterated the problems which students encounter when they first begin writing SEED Papers. However, this student has also discovered that writing SEED Papers have enabled her to express herself as well as to focus on an additional problem to address:

> This is the fourth SEED Paper that I have written. On this particular occasion I have no general idea on what to write. Therefore, I have decided to write on my indecisiveness. The SEED Papers have made me search within myself and have brought out some of the feelings [which] I can write better than I can verbalize. The SEED Papers have caused me to establish opinions on many issues [which] have been in the news lately....The only problem I have with writing is that the words don't flow from my mind to the paper....I know that I must continue to write so that my ideas are clear and concise...I must continue to write to improve presentation of my ideas so it doesn't appear that I am babbling without a clear focus (Adams, 1994).

Finally, a number of graduate students, who are practioners in elementary and secondary classrooms have related how they are employing the practice by asking their own students write SEED Papers. In the following excerpt. a graduate student who teaches keyboarding in a local high school wrote recently about the benefits she has received from having her own students write SEED Papers.

> Having students to write SEED Papers is a wonderful idea. It permits them to freely share anything. For some, this is the only opportunity to express themselves freely. It also opens up a communication path between students and teacher. By opening this pathway, students and teacher begin to develop a special relationship and trust that would otherwise be lost....Initially, [my students] did not like the idea [of a SEED Paper]...but soon looked forward to Friday's when they could share with me their teenage, school, and home problems...Soon they were anxiously waiting for Monday's to receive their papers in order to read my advice. Some Friday's, they did not have the opportunity to write and expressed negative feelings about this (Leak, 1994.)

The I-Search Paper

Within the past few years, "an alternative research tradition has been evolving in this country" (Goswami and Stillman, 1987). This type of inquiry, illustrates the difference in what Garth Boomer has described as "BIG R" and "small r" research (1986, p.5). Boomer defined "BIG R" research as the study of legitimate problems which exist "elsewhere" from the context of the researcher whose primary goal is to generalize and apply the resultant knowledge regardless of the context. On-the-other-hand, "small r" research projects are context specific and are initiated in response to the felt needs of those individuals whose lifestyles will be fundamentally impacted by the results of the research.

An adaptation of Ken Macrorie's I-Search Paper has afforded many students the opportunity to engage in just this type of "small r" research. It is research which is personally meaningful both to their lives and their own unique learning environments. In short, an I-Search Paper is a process by which students first learn to ask and then to seek answers for questions which have erupted out of their own experience and not out of the experience of their instructor.

Philosophical Basis of the I-Search Paper

The philosophical foundation for an I-Search Paper rests with Charles Sanders Pierce who posited that reasoning was actually embedded within the continuous cycle of abduction, deduction, and induction. (Siegel and Carey, 1989). In short, abduction, or the genesis of ideas (Truesdale, 1991), is the point at which ideas are spawned (Deely, 1982) while deduction involves the "movement from ideas to other ideas" (Siegel, 1984, p.59) and induction tests the ideas back against the realm of experience (Siegel and Carey, 1989, p.24).

Pierce (Skagestad, 1981) likened the learner's pursuit of knowledge to walking across an endless bog. If the learner stood in one place for very long, he or she sank. In order to retain sufficient footing, the learner had to therefore continuously traverse the bog. Occasionally, however, the learner stepped into an anomaly (Kuhn, 1970) within the contextual landscape of the bog. An anomaly was an unexpected sign or something that could not be explained but which caused the learner to pause and to start to reflect upon its meaning. The learner then engaged in abduction as a way of beginning to explain the unexpected occurrence. In an attempt to further develop and refine his or her ideas, the learner then deduced. Finally, armed with a credible hypotheses, the learner inducted or tested this new theory against experience. However, if after discovering that the theory could not explain the anomaly, the cycle of reasoning was set into motion once again and beliefs were altered yet again.

The I-Search Process

The process of composing an I-Search Paper begins when students are asked to monitor their inner-selves in order to pay attention to those anomalies which have arisen during their lived experiences. In essence, instead of choosing a topic for study, the students are allowing the topic to choose them.

Next, the students bring their personal anomalies to class and with the instructor, arrange their desks into one large circle. Then, one by one, the students are asked to talk about their anomalies plus explain why or how they became interested in their topics. The purpose of this process is twofold. First, as each student explains his/her anomaly, the questions from their peers enable each student to further define their research question. Second, because the actual research of an I-Search Paper is dependent upon interviews, many class members are frequently able to suggest individuals who can be contacted for an interview. After all students have been given a chance to discuss their anomaly as well as receive the names of their initial contacts a brief lesson is conducted on how to design appropriate interview questions is presented by the instructor. After determining the interview questions, the individual search begins.

During a subsequent class session, students write the introductions to their I-Search papers. The content of the introductions is extremely simple to compose. Basically, the students assess their knowledge about the topic before they begin to develop the search and determine how this process might impact their learning as well as their lives.

The remainder of the I-Search Paper is composed of "the story of the hunt" for data. Although the I-Search Paper can be any length, primarily because new anomalies arise during the search, it is generally limited to five to seven pages. In addition, as the due date for submission draws near, a class period is scheduled for students to bring their drafts to be edited by their peers. Since many undergraduate students have rarely participated in a peer editing session, a Peer Critiquing Guide Sheet is distributed which can be used as scripts during peer editing conferences (see Appendix A for sample).

I-Search Paper Presentations

After the I-Search Papers have been revised, students are expected to present their I-Search Papers to their peers. The only stipulation for the presentation is that it must involve the participation of classroom peers. Presentations have ranged from small group discussions, to role playing, to presentations in which an entire class was asked to leave their seats and move around the classroom. For example, a secondary dance teacher, led one class through an improvised dance routine which combined dance, music, and positive and negative numbers (Temple, 1993).

Prior to the I-Search presentation, an agreement is usually made between the instructor and the students regarding presentation evaluation. Since one of the goals of an I-Search Paper and presentation is to enable students to learn from each other, the evaluation of an I-Search presentation has usually been the responsibility of the students. Typically, the presentation represents one-third of the overall grade: thus, students have used an evaluation form which includes the presenter's knowledge of the subject, the organization and delivery, originality, the level of enthusiasm, and a plausible answer to the initial anomaly.

Evaluation of an I-Search Paper

The real essence of an I-Search Paper remains the development of ideas and their connection to the writer's anomaly. Therefore, the evaluation form used to assess an I-Search Paper reflects this agenda. Olson (1986, p. 118-119) has devised a scoring guide which ranges from a high of ten points, if the I-Search Paper is "well-written, clearly organized, insightful, and technically correct" to a score of one point if "the paper is completely off-track and has no redeeming qualities." Another type of evaluation form is the "Diedrich Scale" (Zemmelman and Daniels, 1986), in which the writer is rated from excellent to poor on a variety of descending items. For example, a paper which reflects well developed ideas and revelance is given a greater numerical value than the paper's style, phrasing, sentence structure, and legibility (See Appendix A, The Diedrich Scale).

Range of Anomalies and Student Response

As an outgrowth of a student's experience the I-Search Papers presented over a period of three (3) semesters have evidenced a range of anomalies. Students in pursuit of a bachelor's or master's degree in education have addressed educational issues in their papers. A sizeable number have focused on classroom teaching practices including: the effects of interest; the importance of Home Economics to our student population; hands-on learning versus the lecture method; and incorporating critical thinking skills into the history classroom. Several graduate students have questioned their interest in becoming public school administrators. Questions which have been raised on this issue include: What are the expectations and the duties of an elementary school principal? Why people choose to become administrators? Do I really want to become an administrator? Students have attempted to answer questions pertaining to issues unique in North Carolina's educational setting. Topics addressed include: Why should North Carolina have an organization such as the NCAE? What are the benefits of year-round education? How and why is Ritalin used in the elementary classroom?

Students who I-Searched non-educational concerns focused on: heartache, fear of flying, the meaning of and analysis of dreams, the characteristics of a successful marriage, how to lose 30 pounds in three months, juvenile offenders, cancer, the expectations of God in order to get into heaven, societal views of public housing occupants, the effects of domestic violence on women, alcoholism's effect on the family, and the qualities of a good clown (See Appendix B, for an example of a graduate student's I-Search Paper).

Student response evaluations concerning the I-Search Paper have been extremely positive. In the written end-of-course comments, some students have remarked that their writing of an I-Search Paper changed the way they felt about research. As one student commented:

> When I think of the two words "research paper" I think of a forced assignment on some topic that is boring. An assignment that takes days and days and I dread even thinking about...however, the I-Search paper gave us the opportunity to choose a topic that interested us and answer a question that we wanted. It was fun and interesting to do...it was a good way for us to see that student interest plays a key role in learning (Mitchell, 1993).

For other students, the opportunity to write an I-Search Paper allowed them "to conduct interviews and do field work in community organizations," and the opportunity to learn from one another as well as acquire deeper insights into the personalities and the individual interests of their classmates.

Having had the opportunity to participate in the searching process, many students have commented that they intend to infuse the I-Search Paper concept into their future classroom teaching practices. As one student wrote:

> I am going to [ask] my students to do I-Search Papers in Social Studies. They will be utilizing their critical thinking skills through the method of discovery/inquiry learning. This will cut down on boring social studies lessons and focus more attention on what's really going on in society...this is what social studies is all about....the idea should be incorporated into all classes at all levels (Barrows, 1993).

Finally, other students have remarked how writing their I-Search Paper and presenting it to their peers had personally effected them. In the search for answers to their anomalies, students were able to reflect about their experiences as both as students and teachers and aided them in becoming more in touch with the endless possibilities of learning. One student summed it all when she wrote that the entire process had:

> ...taught me how to search for answers to questions that I'd always wondered about...I received a chance to know myself better as an educator....[it] was a new experience [which] led me in a directions that I had no intention of going (Ingram, 1993).

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ORGANIZE THE THEME AND RENEW THE METHOD FOR TEACHING EXCELLENCE IN COLLEGE PHYSICS

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Abstract

The paper discusses and gives an answer to the question of how to teach an understandable physics. Among the academic subjects, mathematics serves for teaching students the logical way of thinking. Physics should serve to teach them to notice, that in nature there are processes. Some events cause others and everything is in constant motion and in constant change. This view of nature can be taught well by the simplest science, that is, physics. Because of its simplicity the numerical side of physics has reached a very high level. However, mathematics--which is an advantage for physics in research work--becomes a disadvantage in teaching physics. At least 80% of the problems assigned for solution in teaching are formal repetition of the mathematical form of the theorems or laws of physics. Only the words which are used in the problems are "practical" words. That form of practicing physics stiffens the way of thinking of the students. Instead of understanding the processes in nature by physics, in the thinking of students stubborn algebraic formulas and letters represent physics. For this reason, it is quite natural that after leaving school these formulas will drop out of mind and students will remember their physics teacher--with whom they had human-like associations--rather than physics itself.

Problem

In this paper the writer wants to discuss the problems in teaching physics and an approach to teaching it which may produce better results. However, the title of the presentation may concern each of the subjects taught in colleges.

If one wants to organize, one should know the conditions, the given circumstances and the goals. In teaching, the main condition is determined by the students who are taking part in the education process. They have knowledge which has been obtained in their previous education and thoughts have been are determined by the society in which they are living.

Rewards

It is interesting to compare students of the writer's native country, Hungary, to the students in the United States. In Hungary the population has been living for years in the socialist system or as it is referred here, communism. The socialist system wanted each member of society to be an average person doing her/his work at an average level. Excellent work, generally, was not honored. The life of students after finishing their education was not dependent upon their excellent results in school but rather on the students, or parent's "socialist connections". Students, mainly boys, were generally not hard workers at school, and they wanted to go through the exams at only an average level.

Comparatively, students in the United States want good grades because they are honored. However, it is the impression of the presenter that the students want the good grades from the work of the teachers. Everywhere in their life, daily advertisements on television, they are offered something for money. They have unknowingly developed the feeling that knowledge from their teachers for the money they are paying. However, teachers can give grades but cannot give knowledge. Unfortunately, some teachers feel pressure to give the grades.

Another aspect, which all subjects have in common, is the learning process; this writer believes that although the mind is very good for repetitive verbal learning, for "parrot"-like learning, it also is very good for abstract learning. Therefore, one can give response to not only previously known situations but to ones which have not been met earlier. However, the formation of this kind of knowledge is difficult and to measure its efficiency is nearly impossible. It is realized only in the long run. Traditional teaching prefers verbal-like knowledge because it is measurable.

Skills

The aim of a subject in the teaching process is to provide a special skill which is characteristic to the subject. In the organization of the theme of a subject a significant problem arises in the decision of which subject should be taught under the conditions of the fast rate of change of our world and our technologies. What is worthwhile to be embedded and what is worthwhile to be discussed? Many times the educational process is surmounting obstacles before obtaining the deserved reward, the diploma, just as in fairy tales the goods got their rewards after overcoming obstacles. Meanwhile, the students in current learning or in newer ones, forget what they have learned earlier. (The students need the empty space in their brain for the short period memorization of the newer and newer data). What is the sense of learning? What are the requirements for being educated? These goals are defined in the curriculum, but the implantation and its continuous control are done by the organizing work of teachers.

In school mathematics skill in calculations with numbers, with algebraic expressions and, at a higher level, skill in calculus is wanted. However, it is important that mathematics, beyond the formal skill, should teach the ability to recognize logical connections and to put into mathematical formulas the simplest relations we meet in every day life.

The goals of physics teaching are defined in the curriculum: Understanding the nature of scientific reasoning and the concepts and methods of physics. The main goal of introductory physics teaching should, in the writer's belief, go beyond the teaching of special skills (just as learning a language goes beyond the learning of words), to show the recognition of the characteristics of processes. We meet processes are in our everyday life which always change the world around us, and these changing processes governed by the constant laws of nature. The simplest processes are investigated by physics; for this reason, by physics we can learn the simplest way to recognize and understand the characteristics of processes. The understanding of processes means we know the causes of them, how they could be changed, and at what rate they could be changed. This would be important not only for students majoring in physics, but for all the students taking part in general education. This goal should determine the theme of introductory physics, and the learning and understanding process of the instructor should determine the structuring of the material and the method of teaching.

At the present stage of introductory physics teaching, besides the requirements of verbally embedding special skills, mainly calculations with numbers or with algebraic expressions or the mathematical-like solution of problems given in words are required. This means the practice of some mathematical skills rather than physics.

Renewal

It is necessary to organize the theme and renew the method, but it's a problem doing it for a single physics teacher. It is a program for the process of introductory physics teaching. We should, and we can, organize the theme of introductory physics teaching according to the learning process of our mind and the possibilities given by the present stage of technology.

In current textbooks one can find the same structuring and discussion of the material following the convention developed historically. This way of introductory physics teaching goes against the understanding process of the mind and the internal logic of the physical theories. This is the reason physics is considered a difficult subject to understand. Additionally, in many investigations it was shown that the conceptual understanding of students, even of those who are majoring in physics and/or learning at the graduate level, is very poor in the basic concepts of physics which were discussed at the introductory level.

Understanding means we are able to abstract the common features of various events we observe in nature. Abstraction can be reached by way of investigation and analysis of similar and different observations. A frame for this analysis is needed and this is offered by the proper physical theory. Abstraction should begin with the picturesque events of mechanical motions.

The theory of mechanics, the frame of Newton's laws, gives the basis for the organization of our first abstractions. The main statement of Newtonian mechanics is that the variety of motions is caused by the variety of forces acting. By the laws and concepts of mechanics we may understand the variety of motions and we can predict motions which we did not observe before. Think on the motion of space crafts and the voyage to the moon.

How should introductory physics proceed from the concrete to the abstract, which is the way of understanding? One should show first the variety of motions; one should show at the very beginning not only free fall, motions along a slope and projections of point like bodies, but even vibrations, pendulum motions and any kind of motion that we can show for point like bodies. It could be the interpretation of the motion of the electrons according to the figure on the screen of an oscilloscope. Afterwards we should show motions of rigid bodies; then the motion of deformable bodies, vibration of strings, perhaps plates may follow. The variety of motions presented depends upon specific circumstances (time constraints or shortage in equipment) we have. The discussion of motions should easily be made by video recording with high resolution and listening to the slowed down playback. In the description of various motions the application of various coordinates and frames of reference could be learned together with the usage of vectors.

After making acquaintance with various motions one may start the understanding process, and learn why they are different. The differences can be learned between the abstract terms of physics, as force, energy, momentum, and angular momentum by practicing them in the discussion of various motions. The concept of force has a central role in the understanding of motions. However, the start of its discussion should be first without motion only under static conditions. Under static conditions one should meet not only "free" forces like gravitation and spring force but even constraint forces appearing due to the attributes of the surrounding bodies acting on the examined body: various frictions, the strains along deformed surfaces, strings and wires. It is very good to work at this point with buoyant force, and with electrostatic and magnetostatic forces. This composition of the usage of forces in static conditions makes it possible to gain a deeper understanding of forces.

In the dynamic investigation the parallel application of the concepts and theorems of mechanics should be used in the discussion of motions observed at the beginning. In the application of the variety of physical concepts it should be discussed under what conditions one or the other is simpler to apply. It should be shown how the various dynamic concepts are used for the forecast of particular events. After the forecast we have to do the measurement in the experimentation of the process. In this way, as one proceeds through a few observations, it will be obvious to the students what the aim of physics is and what we can do with the help of physics.

In the integration of the physical discussion it is important to concentrate always on the same theorems and laws and not on the various motions and bodies, as it is done nowadays in textbooks. The discussion of the various motions of various bodies is not important, but the realization of the various physical concepts and theorems in various motions is important. The recognition of which theorem and what kind of terms are simpler to use with this or that kind of motions of this or that body represents true understanding.

This was the organization of the material and of work with the students. How can one renew the method of teaching? As previously described the guiding and organizing work of the teachers in the teaching process is the key.

The conventional way of teaching is lecturing on the material, thinking that if something is told to the students they will know it. This kind of teaching is the heritage of the era when printed or other type of copies of the material to be known was not easily obtained. Nowadays one has the textbooks, and many of them. As, faculty, we may want the students to learn the material from books in the way we guide them. For this reason the interpretation of the material with summary and proper experiments is advisable at lectures. It is not worthwhile to spend too much of the time which is given for the subject in a semester with conventional lecturing. Much of the time should be organized to work with the students in small groups as collective problem solving and discussion with the guidance of teachers or in introductory laboratory work with a lot of guidance to show what is worthy of observation and which way it should be done. One must not leave the student alone assuming that they are able to find and discover the things what were previously achieved by very clever and hard working, interested researchers previously during longer, and not limited, time.

Physics education is required to prepare students for oral and written presentation of their knowledge. The written part can be done in a part of examination in the form of so-called essay questions, the titles of a which are to be given previously during the presentation and discussion of the material at lectures. The oral part of the training of students can be done by their presentation of the solution of assigned problems or experiments. The other students may question and criticism. Additional questions from the teacher are important in these cases. This oral presentation could be a control of the individual work of students during the semester.

Very important, perhaps, the most important point in the understanding process the individual work of students. In textbooks the material is discussed in a definite way. The learning of it, by copying and/or by memorizing, is not good; it does not lead to understanding. Assigning problems for solution helps to repeat the discussed material in another way than it is discussed in the text book, but using strictly numerical problems stiffens the discussed material, hiding the changes which are characteristic of processes. It is better that in a problem only a part of the task should be calculation; a bigger part should be analysis. Giving questions for analysis is good, but we meet two problems in it: One problem is with the student, how they will know the answer is right, and another problem is with the teachers, how to evaluate the answers if they have a lot of students. The method of true and false statements is better than others. However, it is not easy to prepare false statements that seem to be true. If you prepare your discussed material with true and false statements, the students have the opportunity to learn the material with understanding, and at the exam the teachers have the opportunity to measure the understanding of the students in a fast way. An offered form for kind of statement is presented in the handouts for the various parts of introductory physics teaching.

True-false statements are also better for the evaluation of the knowledge of students than multiple-choice type of questions. In multiple-choice questions the student can relate the given statements to each other, which may help to find the answer. In true-false statements there is only one statement that must be related to the knowledge of the student. That type of control of the knowledge can be sharpened by asking for a short explanation of the answer, or in order to block student "gambling" the application of negative points could be considered.

Evident Problems

Regarding the circumstances for physics teaching, we have two kinds of problems for teachers are evident. In big colleges or universities the main form of teaching is the conventional lecture, the efficiency of which is nearly zero (students have two ears: one for the information going in and the other for its going out; both are working with the same efficiency). There are shortages of teachers and rooms to have more lessons or introductory laboratories in small groups. The control of the individual work of students in large numbers is nearly impossible. Assistance is not teaching. To be a good teacher you need to know the subject, have special teaching training and a strong desire to teach.

In small colleges the smaller number of students is very good for a proper education; however, assistance for the work of physics teachers is sometimes missing. At colleges there are many kinds of assistance (even for controlling the parking rules), but assistance for science teachers in preparing experiments or buying the necessary materials for them is not given. It is much easier to do blackboard physics, as mathematics is done, but at least double time is necessary if you want to perform physics teaching by the really worthwhile method with experiments.

If physics is worthwhile to be taught, and it is, then it should be done the way in a manner in which students benefit.

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HOW TAKING CREATIVITY OUT TO THE SCHOOLS CAN FOSTER EXCITING WRITING AT AN EARLY AGE

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Abstract
Good writing is not probable in adulthood unless it has been taught at a young age. Too often, all that is taught is the importance of factual accuracy and mechanical correctness. Good writing has little to do with either. Good writing is, almost always, a blend of fact and fiction, so compelling cold as to take a reader hostage. For writing to be compelling, there is obviously a need for writers to unleash their imaginations and let the "madam" work.

Many sad commentaries exist in contemporary literature about how elementary and secondary schools contribute to the thwarting of a child's imagination. Allen Bloom, in an essay entitled "Music" and June Berkley, in "Releasing the Reluctant Writer," have each spoken to this travesty. As a teacher of writing, I find it incomprehensible to think that anyone could write a compelling piece without in some way engaging the imagination.

When I inherit college freshmen, anywhere from the ages of 18 to 80, I invite them to turn their imaginations loose and allow those imaginations to work for them. More often than not, students, in the most abrupt of manners, will gaze back at me with empty, forlorn expressions and say, "I don't have one!" as though my request exceeded the realm of possibility.

During my tenure at Shawnee State, I have enjoyed the luxury of being invited to the various elementary, junior, and senior high schools in the area to do something--anything that will stimulate students to write. One of the first invitations I ever received was from a delightful young teacher two counties away, a teacher who was high in energy and, according to those who knew her best, was a skillful motivator of students. The day she called, she said, "I'm teaching a class of college prep freshmen. They are the brightest of our ninth graders. More than a week ago, I embarked on a unit in creative writing with them and have gotten absolutely nowhere. Could you possibly come and spend an hour with my class?" I hurriedly checked my calendar, then replied, "Sure, Rose. Friday looks good. And if it's nice outdoors, we'll take them outside." When Friday came, I was there, and we did take her students outdoors to collect raw material from which to write. Students gathered interesting rock formations from around the school grounds, discarded aluminum cans, scum off the top of the pond in back of the school, and fists full of dandelions. With hands and pockets bulging, we returned to the classroom to sort out our treasures and to see who had what. One of my earliest observations was that everyone had dandelions. So, I said, "Select one of your dandelions and set everything else aside." I then requested that they build a word list--a list of descriptors--about their dandelions. I promised them five minutes to come up with as many descriptors as they could muster. Twenty seconds into the five minutes, I discovered all eyes were front and center. I was flabbergasted to think their task was completed so quickly, but rather than interrupt them before the five minutes were up, I stared at them and stared back at me--for four minutes and forty seconds.

When time was up, I began making a composite list on the chalkboard so everyone in the room could benefit from everyone else's contributions. When I finished polling twenty-eight students, I had a grand total of two words on the board-- round and yellow. I understood at once why Rose had gotten "absolutely nowhere." The challenge was no longer just hers, but mine as well. Surely, twenty-eight students were capable of producing more than a grand total of two words.

The problem was, in part, the fact that these students did not know the objects of their writing. If the only words to describe a dandelion were round and yellow, these students knew their dandelions only in terms of what they looked like. And, even so, they did not know much about the appearance of them. I told them that knowledge of anything in terms of sight alone was far too limited for them to be able to write about their subject. They needed to know their dandelions in terms of touch and smell and taste and sound. And so the journey began. We proceeded to explore the dandelions through those other senses, finding far better words than were in the visual list. As we chewed, I watched their puckered mouths and contorted faces that enabled such words as rancid, putrid, and repulsive, clearly better than round and yellow. Once students had a good inventory of words with which to work, they wasted no time in formulating images that made for convincingly artistic poems.

More recently, I had the opportunity to visit a middle school in the county where I teach. I was asked to focus my presentation on matters of observation and characterization. The participating teachers were eager to enter some of their students' work in the county-wide writing competition. Deciding that most of my time would be better spent on facets of observation, I called the coordinating teacher the day before my presentation to request a cornstalk for the occasion. When I arrived at the school the next afternoon, she greeted me with, "I have your cornstalk, but what in the world does a cornstalk have to do with writing?"

Three classes of sixth graders gathered together in a classroom across the hall. I stood the cornstalk against the chalkboard in front of the room and said to the students, "Write down what you see." Most did so in a couple seconds. I said, "How many of your words began with the letter c? Again, most of the hands went up. Then, I said, "How many of you wrote cornstalk?" And again the vast majority of the hands went up. We were on the same wave length.

I went on to explain to them that all observation begins with looking. In that primitive stage of observing, one merely tries to find an appropriate name or label for the object--nothing more than identification. Having identified the object, we were then ready to move on--to seeing. I explained to these novices at writing that we were in search of details. "What can you tell me about the cornstalk?" Some were quick to point out that it had many arms--ten, in fact. Also, it was slender, and one of its segments, about waist high, was solid red in contrast to the more prevalent browns and yellows of the stalk. One of the boys observed toelike appendages where the roots were broken off at ground level. He wanted to call them "toe-roots." The cornstalk even had a head, one that protruded from a broken neck. One of the girls, observing the tassels, said, "It even has antennae to feel its way." And it had one one ear emerging from its hip. The details just kept coming. We even tasted and smelled the talk.

A young lady sitting against a side wall spoke up: "It's terrifying--I mean, terrifying." I said, " How terrifying?" She said, "As terrifying as," then stopped. Coming to her rescue, I jumped in and proclaimed, "The first time I saw my mother without her teeth." And they roared, all eighty of them. A wonderful lead-in to discussion about the importance of comparisons to image-making so as to enhance the intensity of the story line, and a wonderful feature to bolster characterization and suspense. Clearly, we were under way. I left them building on three lines I helped them formulate so as to launch the story. They never knew I left the room. As I eased through the doorway, I looked back, and no one was looking at me.